Canon

Service Manual

ENGLISH EDITION

EOS 1N RS C12-8311

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Canon

EOS-1N RS C12-8311

SERVICE MANUAL

Application

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PREFACE

SERVICE MANUAL COMPOSITION

This manual contains information on servicing the product. It has the following sections.

Part 1 General Information

Provides the basic information needed to understand the product.
(Operating instructions are not included. Refer to the product's instruction book if necessary.)

Part 2 Technical Information

Most technical information about this camera is provided in the EOS-1N Service Manual, therefore Part 2 in this manual is empty.

Part 3 Repair Information

Provides information for disassembly, reassembly, and adjustment of the product, about the tools required, and about the adhesives and lubricants required, and their application.

Part 4 Parts Catalog

Part 5 Electrical Diagrams

Part 6. Appendix

This manual contains SMR information which issued through January 1996 (To ACF-962E).

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Part 1

General Information

1. FEATURES

1.1 PURPOSE OF DEVELOPMENT

The **EOS-1N RS** was designed to address two specific problems which are shared by the vast majority of Single Lens Reflex (SLR) cameras in use today. They are:

- Although the SLR has a major advantage in that what you see through the viewfinder is what you get on film, the reflex mirror design is such that at the instant of exposure, the photographer is blinded by the rising mirror at the decisive moment.
- This same swinging mirror (and sub-mirrors in many cases) takes a certain amount of time to swing up and out of the way, and this ads to the uncertainty of just exactly where the subject moved while the photographer is blinded by the rising mirror.

1.2 DEVELOPMENT CONCEPT OF THE EOS-1N

- To develop a full-featured, flagship SLR to "capture the decisive moment" in real time.
- To incorporate 10 frames per second speed in the same camera.
- To capture an even greater share of the professional camera market.

1.3 FEATURES

NEVER A DARK MOMENT, THANKS TO NEW HARD-COATED PELLICLE MIRROR

- All aspects of the photograph, focus, composition, and timing are visible at the instant of exposure.
- Flash synchronization can be confirmed in the viewfinder.
- Predictive focus control can be watched right up to and during the actual exposure.
- Optimum release timing in slow-synchro photography can be determined easily.
- Results when doing multi-flash with the 540EZ can be seen in the viewfinder.
- Facilitates composition during multiple exposures.
- Camera shake can be seen right in the viewfinder, alerting the camera person to the need to hold the camera steady, especially with long lenses.
- Affects of the aperture stopping down can be seen in real time in RS mode or when using AEB in other modes.

IN RS MODE THE DECISIVE MOMENT BELONGS TO EVERY USER

HIGH-SPEED 10FPS SHOOTING IN A FULL-FEATURE SLR

RS Mode: With AF and AE locked, and the aperture stopped down, ten frames per second photography is possible.

A Mode: The full capabilities of th EOS-1N are available.

NO MOVING MIRROR = NO MIRROR MOVEMENT SHOCK

NO MOVING MIRROR = A QUIETER CAMERA

<MEMO>

2. SPECIFICATIONS

★ : *Items changed from the EOS1-N.*

1. Type

★ 1-1 *Type:* *35mm focal plane shutter (vertical travel) AE and AF single-lens reflex camera with integrated high speed drive and fixed beam-splitting pellicle reflex mirror.*

1-2 Format: 24mm × 36mm

1-3 Usable Lenses: Canon EF lenses (for use with full-aperture metering but not stop-down metering.)

1-4 Standard Lens: EF 50mm f/1.4

1-5 Lens Mount: Canon EF mount

2. AF

2-1 Type: TTL-CT-SIR system (TTL cross-type secondary image formation phase difference detection type usable to f/2.8 on the central vertical line)

2-2 Focusing Points: I I + I I (Center: cross, lateral spacing 4.5 & 7.5 [mm])

2-3 Focusing Point Selection:

(1) Manual selection of focusing points
The photographer can select one of the five focusing points and lock in the selected point.

(2) Automatic selection of focusing points
In one-shot AF mode: The subject information from the five focusing points is used to select the optimum focusing point, and focusing is carried out at that point.
Predictive focus and AI servo AF mode: Although the central section is used at the start of focusing, AI servo AF operation continues even if the subject moves aside from the center sensor to a side sensor.

2-4 Focusing Modes: The following 3 modes are selectable

(1) One-shot AF Mode : Once focused, AF operation stops and AF is locked .

Priority is given to autofocus The shutter will not release until AF is completed.

When using evaluative metering, the AF and AE settings are locked, at the same time. (During partial or spot metering, metering is carried out in real-time until the shutter is released.

CF-No.7-0: When using certain USM lenses, manual focusing using the electronic ring is possible immediately after completion of auto focusing (after focusing is finished or when focusing is not possible).

CF-No. 7-1: Cancels the function of the above 7-0.

(2) Prediction AI Servo AF mode:
The AF system keeps tracking the moving object until exposure is actually made.

Initial frame after holding SW–1 ON in stand by mode: Priority is given to shutter release and exposure can be made anytime regardless if AF is completed or not.

Initial frame after jabbing the release (SW–1 and SW-2 ON almost simultaneously) Exposure is made after AF control is completed once.

The second frame and after during continuous shooting: The lens is driven (maximum driving time 250ms) in conformity with the necessity for object tracking before releasing the shutter.

The in-focus mark does not light when the subject is focused, but blinks at 8Hz when focusing is impossible.

★ *AI Servo AF cannot be used in RS Mode. If RS Mode is selected while in AI Servo AF Mode, focusing mode switches automatically to One-shot AF.*

(3) Manual

AFD lens: Changeover from AF to Manual is made using the switch on the lens.

USM lens: Same as above (when CF–No. 7–1 is selected) or automatic changeover (when CF–No.7–0 is selected).

When focusing is completed, the in-focus mark (a green LED) and superimposing lamp light. No indication is given when the subject is not focused.

★ *Manual focusing using the electronic focusing ring is possible during continuous shooting.*

2–5 AF Operation

CF–No. 4–0: Activated when the shutter button is depressed to the first step.

CF–No. 4–1: Activated when the AE lock button is pressed ON.(When CF–No. 4–1 is set, AE lock s at SW–1 ON.)

★ *CF–No. 4–2: Activated when the shutter button is depressed to the first step, and interrupted if and while the AE Lock Button is pressed.*

★ *Note that AF operation cannot be initiated if the shutter button is already pressed half way in the RS Mode because the aperture is already stopped down.*

2–6 AF Operating Speed — High speed (same as the EOS–1)

2–7	AF Completion Indication	By LCD indication in the viewfinder and by an electronic beeper sound. CF–No.10–0: With superimposing display. CF–No.10–1: Without superimposing display. ★ *On the EOS-1N the beeper can be turned on or off by the main switch. On the EOS-1N RS, custom function CF-12 is used:* *CF-No. 12-0: No beep* *CF-No. 12-1: Beeps upon AF completion*
2–8	AF Working Range	EV 0–18 (ISO 100) using Canon's standard test conditions.
2–9	AF Auxiliary Light	Provided when used together with an EOS flash unit (integrating an AF auxiliary light function). When a flash is used, near-infrared rays (peak wave length: 700nm) are automatically emitted from the flash whenever necessary. 540EZ: Auxiliary light corresponds to all five focusing points Other EOS flash units: Auxiliary light corresponds only to the central focusing point. An AF auxiliary light source is not built into the camera.
2–10	Focusing Point Selection	CF–No.11–0: Focusing point select button + main electronic dial. CF–No.11–1: Exposure compensation button + main electronic dial. CF–No.11–2: Exposure compensation button + main electronic dial. Or by operating the quick control dial (valid during metering, during metering timer operation or during continuous shooting operation only. Automatic selection is not valid.)
2–11	Focusing Point Indication	Indicated by viewfinder superimposed display, and by the 7-segment indicator on the external LCD.
3. Viewfinder		
3–1	Type	Fixed eye–level pentaprism, single lens reflex viewfinder with condenser lens.
★ 3–2	*Focusing Screen*	*Standard (Ec-R) full-surface laser–matte screen with fine spot metering area mark.Screen is not user-interchangeable, but can be changed by Canon Service Facilities. (Interchangeable screens for the EOS–1 can be installed, but see Precautions).*
3–3	Viewfinder Power	–1 ± 2 dpt dioptric adjustment (eyepoint: 20mm); Adjustment knob rotates 360°with clicks every 18°.
3–4	Viewfinder Coverage	Virtually 100% horizontally and vertically. (99% ± 1%)

3–5 Magnification — 0.72 × (–1 dpt, 50mm lens at ∞)

3–6 Viewfinder Information

(1) Central section of the viewing area

1) AF frames (displayed by the SI screen, not by the focusing screen).

2) Fine spot metering area mark (in the central section only)

(2) Bottom of viewfinder

LCD (yellow-green LED back–light) indications of values, patterns and letters.

3) Shutter speed (Out-of-coupling-range warning: Blinks at 2 Hz)

4) Aperture (Out-of-coupling-range warning: Blinks at 2Hz)

* Regarding 3) and 4) above:

CF–No.6–0: Digital indication in ⅓-stops.

CF–No.6–1: Digital indication in full-stops.

CF–No.6–2: Digital indication in ½-stops.

5) Depth-of-field AE mode (*dep 1, dep 2*)

Focusing point: The central focusing point in case of automatic selection and the manually selected focusing point in case of the manual selection.

6) ✳: AE lock (During AEB shooting: Blinks at 2Hz)

7) M: Manual

8) ϟ: Flash charging completed.

9) +/–: Exposure compensation

(Also lights during flash exposure compensation using the 540EZ or 430EZ.and during camera flash exposure compensation.)

10) ●: Autofocusing completed (NG: Blinks at 8Hz)

(3) Outside the visual field, to the right

LCD (yellow-green LED backlit) indications of scales, dots and symbols.

11) 1/3-stop scale (± 3 stops)

12) Dot bars (19 ▬ symbols and ▲▼)

12)–1 AE mode: Exposure compensation amount

12)–2 AE lock: Real–time metering deviations

12)–3 Manual exposure level

12)–4 AEB step amount (3 points)

12)–5 Background exposure during flash photography as metered by internal metering program.

13) Remaining frame display. (Digital indication using "*F*" plus figures *1 – 9.*)

These indications cannot be canceled. With built-in illumination for the LCD information window (Green LED backlight).

★ 3-7 *Mirror*

Fixed pellicle beamsplitter
(Reflection: Transmission = 35:65)
Viewfinder blackout time: None

3-8 Mirror Cut-off

None with lenses up to the 1200mm @ f/5.6.

3-9 Depth-of-Field Check

Possible (activation of the D-o-F button stops the lens down to the calculated aperture valve).

★ *In RS Mode, the aperture is stopped down by SW-1 (shutter button half stroke), therefore operation of the D-o-F button thereafter is meaningless and its switch input is ignored by the camera.*

3-10 Eyepiece Shutter

Provided.

3-12 Other

Exclusive Eye-cup Ec-II with locking feature is provided as standard equipment (removable). An angle finder, magnifier or diopter compensation lens E can be attachable to the eyepiece.

4. Exposure Control

4-1 Metering

TTL full-aperture metering using a sixteen-zone SPC and BASIS. Selectable from the following three methods:

1) CF-No.8-0: Evaluative metering
CF-No.8-1: Center-weighted average metering.

2) Partial metering (Metering range: Central A0, A1, A2 and B5, corresponding to about 9.0% of the viewfinder area).

3) Fine spot metering (about 2.3% of viewfinder area).
CF-No.13-1: Spot metering linked with the focusing points. (Using A0 - A4, about 3.5% of the viewfinder area. A0 is used in automatic focusing point selection mode.)

*3) The first frame when making continuous exposures: Real-time metering. The second frame and after: AE locked at the first frame.

4-2 AE Modes

Selectable from the following six AE modes or manual.

(1) Shutter-priority AE (without the safety shift function).

(2) Aperture-priority AE (same as above).

(3) ★ Depth-of-Field AE is not provided in the EOS-1N RS.

(4) Intelligent program AE (shifting possible)

(5) A-TTL program flash AE (3-point flash exposure metering)

(6) TTL program flash AE (3-point flash exposure metering)

(7) Manual (bar dot display, metered manual)

CF–No.5–0: Tv set: Electronic dial.
AV set: Quick control dial.

CF–No.5–1: Tv set: Electronic dial.
Av set: Quick control dial

Using the Command Back E1: Since there is no quick control dial, its function is replaced by pressing the exposure compensation button and turning the main electronic dial.

(8) Bulb

CF–No.6–0: The setting pitch of 1), 2) and 7) is in 1/3-stop increments.

CF–No.6–1: The setting pitch of 1), 2) and 7) is in 1-stop increments.

CF–No.6–2: The setting pitch of 1), 2) and 7) is in 1/2-stop increments.

★ 4–3 *Metering Range*

(1) Evaluative metering: EV 1 – 20 (at normal temperature, 50mm f/1.4, ISO 100).

(2) Partial metering: EV 1 – 20 (as above).

(3) Fine spot metering: EV 3–20 (ISO 100, any maximum aperture).

4–4 Coupling-range Warning

External and viewfinder internal LCD digital display blinks at 2 Hz.

4–5 Exposure Metering

Works when the shutter button is pressed to the first step (SW-1 on).

Before release: The metering timer works for 6 seconds after finger is removed from the shutter button.

After release: The metering timer works for 2 seconds after finger is removed from the shutter button.

4–6 Film Speed Range

CF–No.3–0: ISO speeds from 25 – 5000 are automatically set in 1/3-stop steps according to the DX code. Manual setting from ISO 6 to 6400 can also be made.

When NON–DX code film is used, the previously set ISO film speed blinks in the display, indicating that manual setting is required.

CF–No.3–1: Manual setting only (ISO 6 – 6400)

4–7 Exposure Compensation

(1) AEB: Auto Exposure Bracketing

1) Presetting: Possible in all exposure modes excluding (5), (6), and (8) of the AE modes listed above in 4–2.

★ *AEB in not possible in RS Mode and is cancelled automatically if already set when RS Mode is engaged.*

2) Operation: Press the battery check button and the film winding mode select button and turn the main electronic dial. CF–No.9–1, –3: It can also be set by

holding the AF mode select button + shooting mode select button pressed ON and turning the main electronic dial.

3) Bracketing range
CF–No.6–0, –1: 1/3-stop steps ± 3stops
CF–No.6–2: 1/2-stop steps ± 3 stops

4) Number of exposures: Three frames are exposed in accordance with the film transport mode as given below:
CF–No.9–0, –1: 3 frames in the order of – ' 0 ' +
CF–No.9–2, –3: 3 frames in the order of 0 ' – ' +

5) The affected camera setting(s) for the various shooting modes are as follows:

Exposure Control Modes		TV	AV
Shutter-priority AE		-	•
Aperture-priority AE		•	-
Depth-of-field AE		•	-
Program AE		•	•
Manual Exposure	CF-No. 5-0	•	-
	CF-No. 5-1	-	•

6) Cancellation
CF–No.9–0, –2: CLEAR, flash charge completion, bulb, main switch "L", lens exchange, film loading, AL or REW.
CF–No.9–1, –3: AEB operation is canceled when one of the following occurs: CLEAR, flash charge completion and bulb.

(2) Manual setting
1) Range and precision
CF–No.6–0, –1: 1/3-stop steps ± 3 stops
CF–No. 6–2: 1/2-stop steps ± 3 stops
2) Operation
CF–No.11–0: Quick control dial, exposure compensation button + main electronic dial.
CF–No.11–1: Quick control dial, focusing point select button + main electronic dial.
CF–No.11–2: Focusing point select button + main electronic dial

(3) Combinations of the above (1) and (2) are also valid.

4–8 AE Lock

(1) Auto AE lock : The AE reading is locked at the instant focusing is completed in one–shot AF mode when using evaluative metering.

(2) Manual AE lock CF–No.4–0: Effective in any metering mode by pressing the AE lock button.

CF–No.4–1: Effective in any metering mode by pressing SW–1 ON.

When the metering timer is working, AE lock is maintained and can be renewed by pressing the shutter button again.

To cancel, wait for the metering timer to go OFF, turn the main SW to "L", or press one of the respective mode buttons, BC, CLEAR, REW or CF button.

* The AE lock button does not function while an EZ series flash is being used after charging is completed.

★ *In RS Mode, AE is not locked at completion of AF.*

4–9 Multiple Exposures

Possible. Automatic resetting continuous multiple exposures are possible. (Film drift: 0.1mm or less)
Designation of the number of multiple exposures is also possible (up to 9 exposures, maximum). (Intermediate cancellation or resetting is also possible.)

5. Shutter

5–1 Type

★ *Double shielding focal plane type using vertical–travel carbon blades. All speeds are electronically controlled, . Electromagnetic control independently releases the first curtain and second curtain, respectively. (Curtain speed 2.7 ms/24 mm; 2.2ms for EF8000 slit width)*

5–2 Speed Range

1/8000 sec. to 30 sec. 1/3-stop digital indications on the LCD X = 1/250 sec. in shutter-priority AE and manual exposure modes.

CF–No. 6–0: 1/3-stop setting

CF–No. 6–1: Full-stop setting

CF–No. 6–2: 1/2-stop setting

Elapsed time indication is provided in bulb mode. (Advances 3 bar marks every 30 seconds, indicates up to 120 seconds.)

5–3 Release System

Soft touch electromagnetic release system (without cable release socket)

5–4 Release Time Lag

Release time lag (excluding AF operation)
EF 50mm *f*/1.4USM lens set to *f*/2.8.

(1) In A Mode;
SW–1 ON, pause SW–2 ON to exposure start: 61ms
Simultaneous SW–1 and SW–2 ON to exposure start: 206ms

(2) In RS Mode:
SW–1 ON, pause SW–2 ON to exposure start: 6ms

5–5 Self-timer

Electronically timed 2 or 10 second delay self-timer.

The self-timer starts when AF operation is finished in any AF mode (the AE reading is locked at this time) and the shutter button is pressed to the second step. (The timer will not start even if the shutter button is pressed until the AF operation is finished.)

The self-timer operation is indicated by an LED (Initial 8 sec.: 2Hz, final 2 seconds: 8Hz flashing) and the external LCD counts down the seconds with a digital display.

To cancel the timer after activation, set the main switch to the "L" position. Timer operation will be interrupted.

5–6 Camera-shake Warning

Not provided.

6. Film transport

6–1 Film Loading

Automatic loading using a sprocket and toothed spool. Blank film advance starts automatically when the back cover is closed after loading the film (only the film advance mechanism operates) and winds the film until the film counter reaches "1" (time required: 3 sec.) before stopping automatically. Loading is not possible when the main SW is at "L".

6–2 Winding System

Automatic winding by a dedicated coreless miniature motor.

★ *6–3 Winding Modes*

Three winding modes: High-speed continuous exposure (CH) mode, low-speed continuous exposure (CL) mode or single exposure (S) mode.

6–4 Film Winding Start

Film winding starts when the exposure completion signal is detected.

6–5 Film Winding Check

By moving bar mark on the LCD display panel.

6–6 Winding Speed

(1) The winding speed [f/s] is as follows in continuous exposure mode at shutter speeds of Tv=1/1000 sec. or faster in RS-CH mode, and at shutter speeds of Tv=1/250 sec. or faster in other modes.

Mode	RS Mode	A Mode	
Winding		One Shot / Manual	AI Servo AF
CH	Approx. 10f/s	Approx. 6f/s	Approx. 5f/s
CL	Approx. 3f/s	Approx. 3f/s	Approx. 2.5f/s

(2) Single exposure (C) mode; winding is completed at the same speed as during CH mode.

6–7 Shooting Capacity

Number of 24EX/(36EX) film rolls .

Power	Ambient Temperature	
	+20°C	-20°C
8x LR6	100/(65)	6/(4)
8x KR15/51	45/(30)	30/(20)
NiCd Pack E-1	65/(45)	45(30)
8 x FR6250/(165)	90/(60)	

6–8 Film rewinding System

Automatic rewinding by a coreless miniature motor.

6–9 Start of Rewinding

(1) Automatic

CF–No. 1–0, –2: Auto–rewind starts under the following conditions (–0 high speed and –2 silent)

1) When the DX designated number of exposures are completed.

2) When the film end is sensed (by tension).

CF–No. 1–1,–3: Automatic rewinding starts when the film rewind button is pressed after the film roll is completed. (–1 high speed and –3 silent)

(2) Mid-roll rewind: Mid-roll rewinding is possible at all times by pressing the film rewind button.

6–10 Rewinding Confirmation

By moving bar mark and count-down of the frame counter display.

6–11 Rewinding Time

Time required for rewinding a 24EX/(36EX) roll, using new batteries at normal temperature
(Times in this chart are all approximate in seconds.)

Power	Rewind Time	24exp/(36exp)
	CF-No.1-0,1	CF-No.1-2,3
8x LR6	4.5(7)	13/(20)
8x KR15/51	4.5(7)	13/(20)
NiCd Pack E-1	4.5(7)	13/(20)
8 x FR6	4.5(7)	13/(20)

6–12 Rewind Completion

CF–No.2–0: Stops automatically after the film leader is wound completely into the cartridge.

CF–No.2–1: Stops automatically leaving just the film leader section protruding from the cartridge. Under CF–No.2–1, when the shutter is released with the back cover open, the shutter is activated at 1/8000, regardless of settings, to protect the shutter mechanism.)

6–13 Completion Indication — Cartridge symbol blinks at 2Hz in LCD panel.

6–14 Film Loaded Check

(1) Indicated by a film cartridge symbol on the top-deck LCD regardless of switch setting.

(2) By visual check using the standard back cover's film check window.

6–15 Frame Counter

(1) Additive (counts down during rewinding) digital indication by the electronic counter on the LCD panel.

(2) The number of frames remaining is shown by a single 7–segment LCD on the right side of the viewfinder. When more than nine frames remain, an "*F*" is displayed (The display disappears during rewinding)

6–16 Film Rewind Noise — 48dB at 15 cm behind the camera.

7. Camera Body

7–1 Back Cover — Can be opened or removed by operation of the back cover open latch (with safety lock). Provided with a film check window, but no memo–holder.

7–2 Flash Contacts

(1) Accessory shoe: X sync and dedicated contacts

(2) Lower section of the right side of the camera body: JIS type–B PC socket (with lock screw and shock prevention function at the accessory shoe).

Simultaneous use of the hot shoe and PC terminal for simultaneous flash is also possible.

7–3 Accessory Shoe — With a lock pin hole to secure Speedlites equipped with a locking pin.

7–4 Automatic Flash — Using EOS type EZ series flash units with the camera set to program AE mode.

(1) A–TTL flash exposure: The shutter speed is automatically set to a synchronizing speed (1/250 – 1/60 sec.) when charging is complete and the optimum flash aperture value is automatically set in compliance with the distance determined by IR pre–flash and the subject conditions (brightness) by the A–TTL program stored in the camera and the flash. No pre-exposure out-of-coupling-range warning. TTL automatic flash exposure control by off-the-film reflection metering. (Three-zone flash exposure metering, linked to the selected focusing point). Automatic fill-in flash is also possible.

(2) TTL automatic flash exposure: The shutter speed is automatically set to a synchronizing speed (1/250 – 1/60 sec.) and the flash aperture value is automatically set by the TTL program of the camera body. TTL flash exposure control by off-the-film reflection metering. (Three-zone flash metering, linked to the selected focusing point) Automatic fill-in flash is also possible.

In either (1) or (2) above, a manual synchronizing shutter speed of less than 1/250 sec. can be selected in shutter-priority AE mode and a manual aperture value can be selected in aperture-priority AE.

(3) Other

1) T or A series Speedlites can be used in manual exposure mode.

* Shutter speed: Set manually to a shutter speed within 1/250 – 30 sec.
* Aperture: Set the same aperture value on the camera body and flash unit.

2) General–use flash units: General–use small–sized flash units: Can be used for synchronous exposure at 1/250 sec. or slower. Large studio flash units: Can be used for synchronous exposure at 1/125 sec. or slower, but tests should be carried out to confirm flash synchronization.)

7–5 Flash Exposure Compensation

(1) Number of stops

CF–No.6–0, –1: ± 3 stops. in 1/3-stop steps

CF–No.6–2: ± 3 stops in 1/2-stop steps

(2) Operation: Metering mode button + quick control dial or Metering mode button + focusing point select button + main electronic dial.

★ 7–6 *Custom Functions*

Fourteen custom functions are the same as EOS-1N except CF#12 (see Specification 2-7 AF Completion Indication: The active CF–No. is displayed on the external LCD panel (exposure bar indicator).

7–7 Clear Button

(1) When this button is pressed under normal state, respective items are simultaneously reset to the following status. However, when using partial metering, fine spot metering or spot metering, under the CF–No.8–1 (whereby the evaluative metering mode is changed to center-weighted average metering mode), the metering mode is not changed even if the clear button is pressed.

Item	Reset Status
Shooting Mode	Program AE
AF Mode	One-shot AF
Metering Mode	Evaluative Metering
Film Wind Mode	S (single exposure)
Multiple exposures	Default settings
Exposure Compensation	Default settings
AE Lock	Default settings
AEB	Canceled

(2) When the clear button is pressed in the custom function setting state, all the custom functions are automatically reset to their home positions (–0).

★ 7–8 *Power Source*

Same as the PDB–E1 power sources.

7–9 Main Switch

Turns the camera OFF when set to the "L" position.

7–10 Battery Check

3-step bar mark display (4-step if OFF included) on the LCD panel when the BC button is pressed.

7–11 External Display

Large-sized LCD panel. Built-in full-surface uniform illumination (EL) function.

7–12 Tripod Socket

CU–1/4" 20P

7–13 Remote Control

Possible. A three-pin remote control socket is provided in the lower section of the left side of the body.

★ 7–14 *Grip*

Fixed, not interchangeable.

7–15 Body Material

Hybrid glass–fiber reinforced polycarbonate body with diecast aluminum aperture section.

7–16 External Color Finish

Black

7–17 Dimensions

161(W) × 155.9(H) × 71.8(D) mm

★ *7–18 Weight*

Net Weight		*Combinations*			
EOS-1N RS:	*1295*	●	●	●	●
Hand Strap	*20*	●	●	●	●
8 LR6 cells200			●		
NiCd Pack E-1	*225*			●	●
8 FR6 Cells	*120*				●
Gross weight:		*1315*	*1515*	*1495*	*1435*

Notes: Battery Magazine: 45g included in EOS-1N RS weigh, except in combination with NiCd Pack E-1.

8. New Main Accessories		Same as EOS-1N, except Battery Pack E-1 and cases are not applicable.
8–1	Speedlite 540EZ	Clip–on system flash usable with external power supply.
8–2	Wireless Controller LC–3	Three terminal remote controller for EOS cameras.
8–3	Eye–cup Ec–II	Standard equipment with the EOS-1N and also usable with the EOS–1).
★ *8–4*	*Focusing Screen Ec–R*	*Standard equipment with the EOS-1N RS.*

3. VISUAL INDICATORS (SAME AS EOS-1N)

3.1 VIEWFINDER INFORMATION

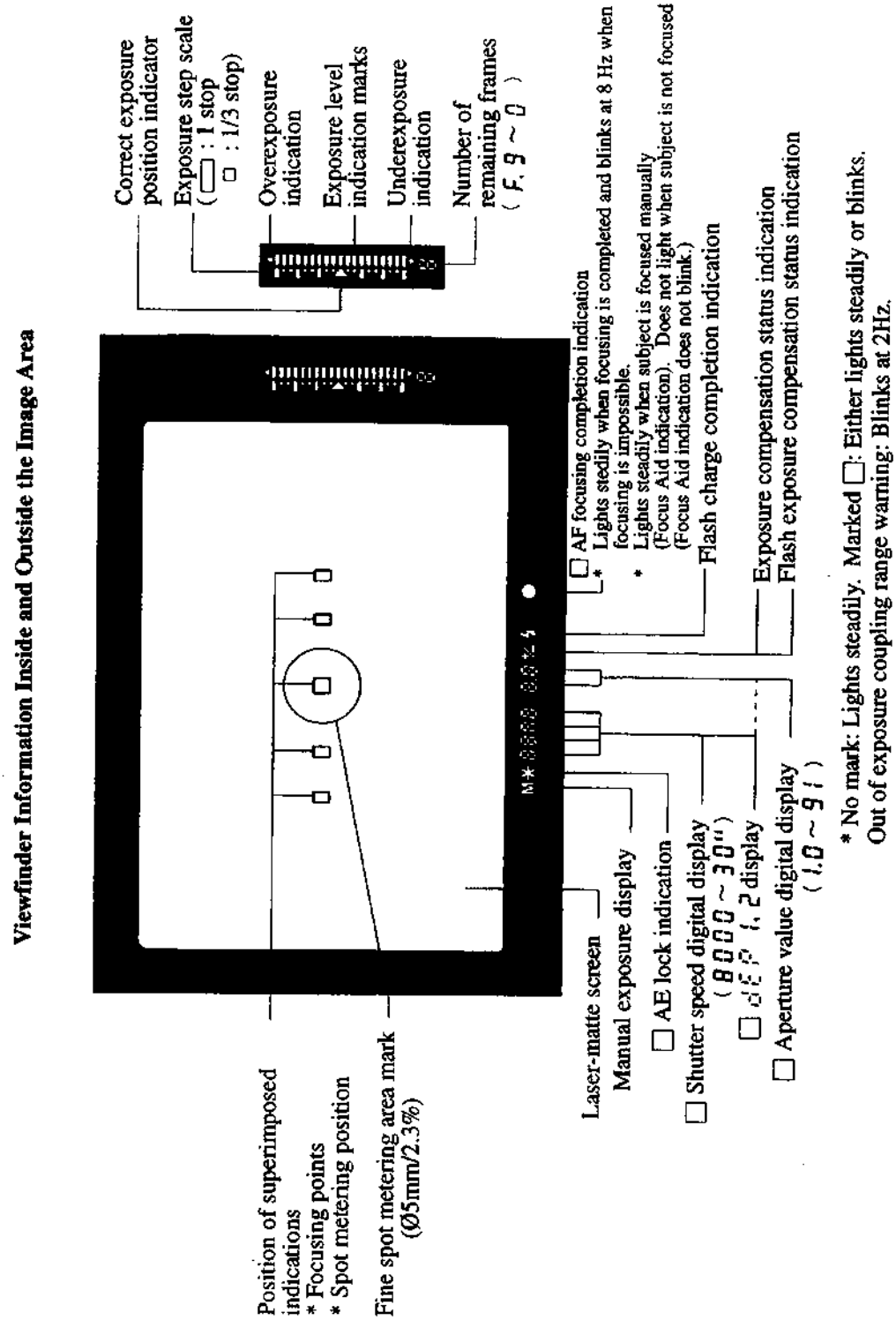

Viewfinder Information Inside and Outside the Image Area
Correct exposure position indicator
Exposure step scale (□ : 1 stop □ : 1/3 stop)
Overexposure indication
Exposure level indication marks
Underexposure indication
Number of remaining frames (F, 9 ~ 0)
AF focusing completion indication
* Lights stedily when focusing is completed and blinks at 8 Hz when focusing is impossible.
* Lights steadily when subject is focused manually (Focus Aid indication). Does not light when subject is not focused (Focus Aid indication does not blink.)
Flash charge completion indication
Exposure compensation status indication
Flash exposure compensation status indication
* No mark: Lights steadily. Marked □: Either lights steadily or blinks.
Out of exposure coupling range warning: Blinks at 2Hz.
Position of superimposed indications
* Focusing points
* * Spot metering position
Fine spot metering area mark (Ø5mm/2.3%)
Laser-matte screen
Manual exposure display
AE lock indication
Shutter speed digital display (8000 ~ 30")
display
Aperture value digital display (1.0 ~ 91)

Fig 1-1 Viewfinder Information

3.2 TOP-DECK LCD INFORMATION

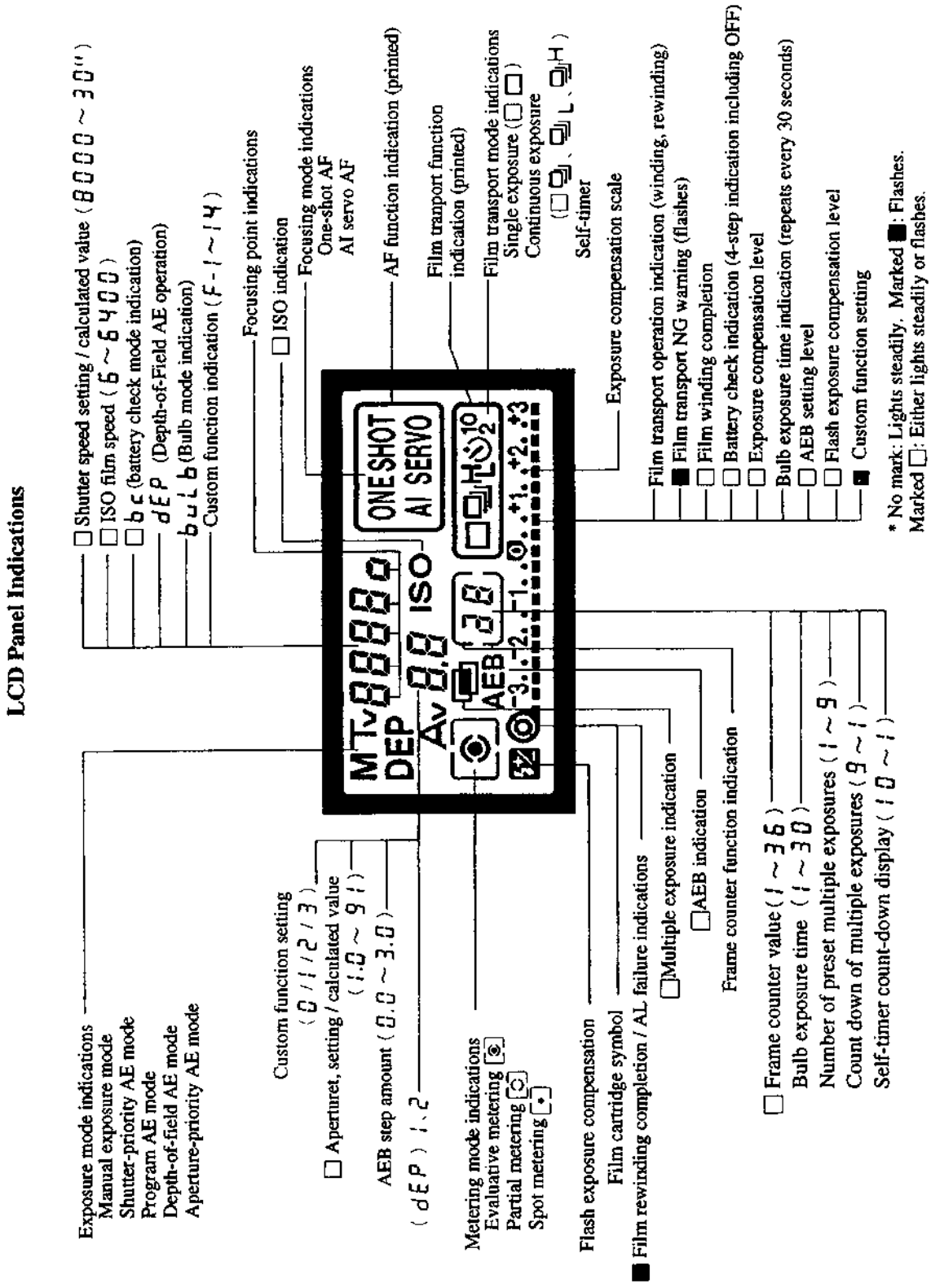

LCD Panel Indications
Exposure mode indications
Manual exposure mode
Shutter-priority AE mode
Program AE mode
Depth-of-field AE mode
Aperture-priority AE mode
Shutter speed setting / calculated value (8000 ~ 30")
ISO film speed (6 ~ 6400)
bc (battery check mode indication)
dEP (Depth-of-Field AE operation)
bulb (Bulb mode indication)
Custom function indication (F-1 ~ 14)
Focusing point indications
ISO indication
Focusing mode indications
One-shot AF
AI servo AF
AF function indication (printed)
Film tranport function indication (printed)
Film transport mode indications
Single exposure ( )
Continuous exposure (, L, H)
Self-timer
Exposure compensation scale
Film transport operation indication (winding, rewinding)
Film transport NG warning (flashes)
Film winding completion
Battery check indication (4-step indication including OFF)
Exposure compensation level
Bulb exposure time indication (repeats every 30 seconds)
AEB setting level
Flash exposure compensation level
Custom function setting
* No mark: Lights steadily. Marked : Flashes.
Marked : Either lights steadily or flashes.
Custom function setting (0 / 1 / 2 / 3)
Aperture, setting / calculated value (1.0 ~ 91)
AEB step amount (0.0 ~ 3.0)
(dEP) 1, 2
Metering mode indications
Evaluative metering
Partial metering
Spot metering
Flash exposure compensation
Film cartridge symbol
Film rewinding completion / AL failure indications
Multiple exposure indication
AEB indication
Frame counter function indication
Frame counter value (1 ~ 36)
Bulb exposure time (1 ~ 30)
Number of preset multiple exposures (1 ~ 9)
Count down of multiple exposures (9 ~ 1)
Self-timer count-down display (10 ~ 1)
MTv
DEP
Av
ISO
ONE SHOT
AI SERVO
AEB

Fig 1-2 Top Deck LCD Information

3.3 WARNINGS

1. AE MODES EXPOSURE WARNINGS

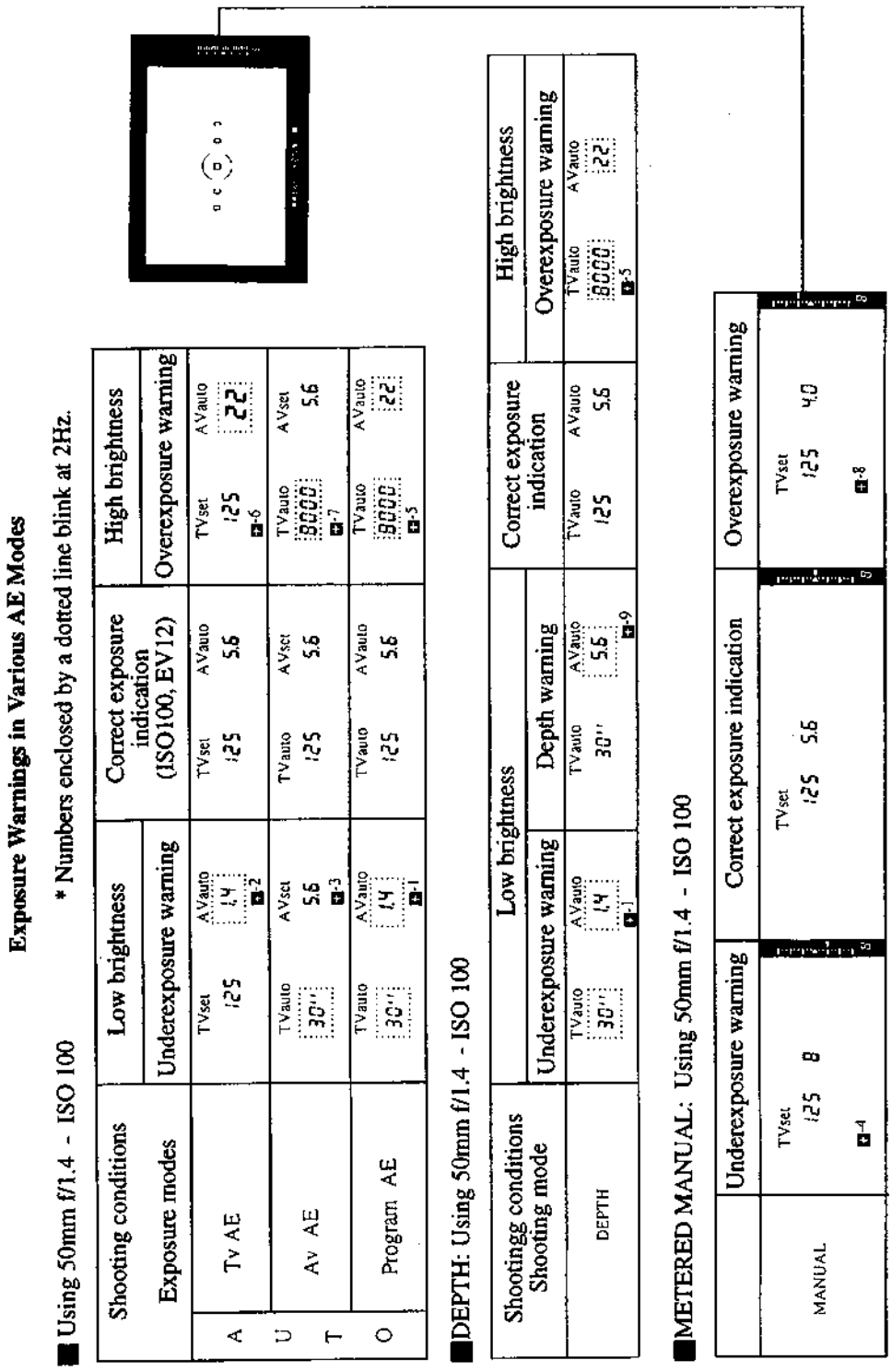


Fig 1-3 AE Warnings

■Viewfinder Exposure Warnings in A-TTL and TTL Automatic Flash Exposure Modes (Using 50mm f/1.4)

* Numbers enclosed by a dotted line blink at 2Hz.

Subject brightness	Low brightness General flash photography	Medium brightness Daylight fill-in flash	High brightness Daylight fill-in flash
	⬚ Underexposure warning based on overall average metering	Correct exposure level based on overall average metering	⬚ Overexposure warning based on overall average metering
Exposure modes	TTL flash exposure - Correct	TTLflash exposure - Correct	TTL flash exposure - Correct
Tv AE	TVset 125 AVauto 1.4 +2	TVset 125 AVauto 5.6	TVset 125 AVauto 22 +6
Av AE	TVauto 1'' AVset 5.6 * Note-1	TVauto 125 AVset 5.6	TVauto 250 AVset 5.6 +7
Program AE	TVauto 60 AVauto 1.4~22 * Note-2	TVauto 125 AVauto 5.6	TVauto 250 AVauto 22 +5

* Note-1: Automatic slow synchro exposure state indication at EV 5. When the brightness drops to a level requiring a shutter speed of 30 sec., 30" blinks for warning.
* Note-2: General indoor shooting in program AE mode. Underexposure warning is not available in this state.
* Note: When using flash in DEPTH mode, exposure is carried out the same asin program flash mode.

Fig 1-4 A-TTL & TTL Warnings

Exposure related Warnings and Countermeasures

[1] Exposures using the functions of the basic camera, without flash.

Type of warning	Warning indications		Countermeasures for respective warnings
	TV warnings	AV warnings	
1. Underexposure warnings ①	30''	AVO	■-1 (1) Use flash or artificial lighting. (2) Use a higher speed film. (3) Give up the photograph.
②	TVset	AVO	■-2 (1) Set a slower shutter speed until the aperture value stops blinking.
③	30''	AVset	■-3 (1) Open the aperture until the shutter speed stops blinking.
④	TVset	AVset	■-4 (1) Open the aperture or (2) Set a slower shutter speed, until the ▬ mark aligns with the correct exposure mark ▷.
2. Overexposure warnings ①	8000	AVmin	■-5 (1) Use an ND filter. (2) Use a lower speed film. (3) Give up the photograph.
②	TVset	AVmin	■-6 (1) Set a fester shutter speed until the aperture value stops blinking.
③	8000	AVset	■-7 (1) Close the aperture until the shutter speed stops blinking.
④	TVset	AVset	■-8 (1) Close the aperture or (2) set a faster shutter speed, until the ▬ mark alignts with the correct exposure mark ▷.
3. DEPTH warnings	30''	AVauto	■-9 (1) Expected depth of field cannot be obtained. → Use a higher speed film or (2) give up the DEPTH mode exposure.

[2] Exposures using flash: 540EZ/430EZ The following warning is added to the above warnings in [1].

4. Flash synchronization speed high-speed-limit warning	250	AVset	■-7 (1) Close down the aperture until "250" stops blinking.

Note:1) ⬚ Numbers enclosed by a dotted line blink at 2Hz.
2) AV 0 represents the maximum aperture of the lens and AVmin represents the minimum aperture of the lens.
3) TVset and AVset stand for the shutter speed and aperture value, respectively, manually set by the user.
4) TVauto and AVauto represent the shutter speed and aperture value, respectively, automatically calculated and set by the camera.

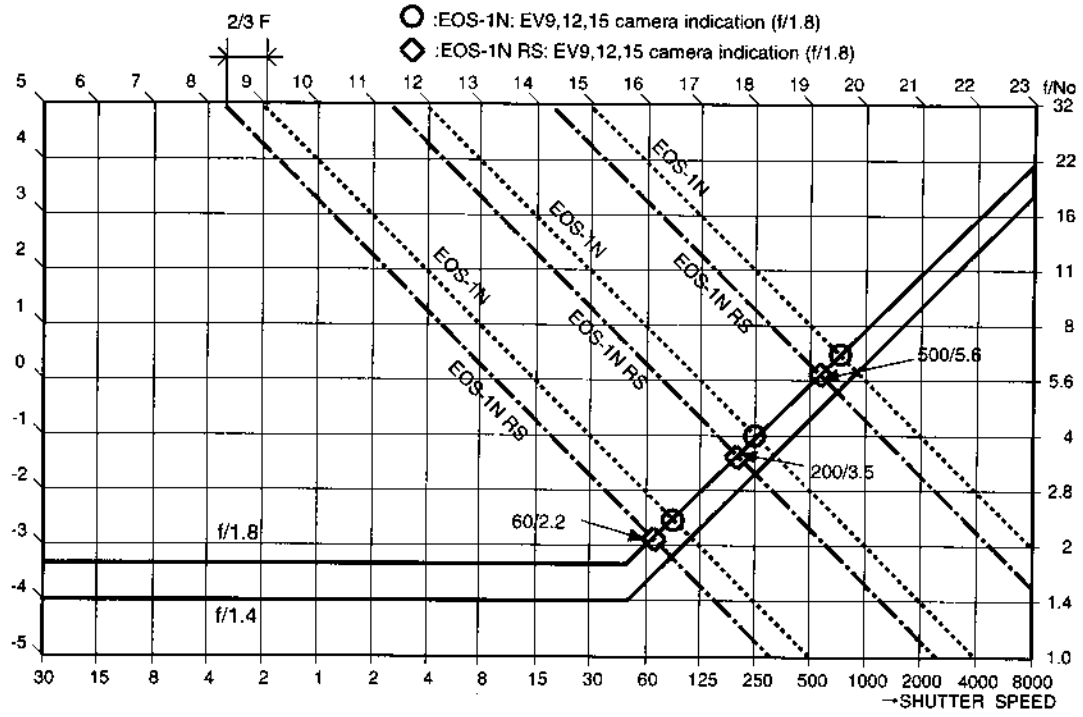
Fig 1-5 Exposure Warnings and Countermeasures

4. PROGRAM DIAGRAMS

4.1 EF 50MM F/1.4 (F/1.8) & EF 35-105MM F/3.5 - 4.5

Due to the pellicle mirror there is a 2/3 stop difference in the camera indication for the EOS-1N RS compared to the EOS-1N, but the program line is the same.

EF 50mm f/1.4 (f/1.8)



EF 35-105mm f/3.5 - 4.5

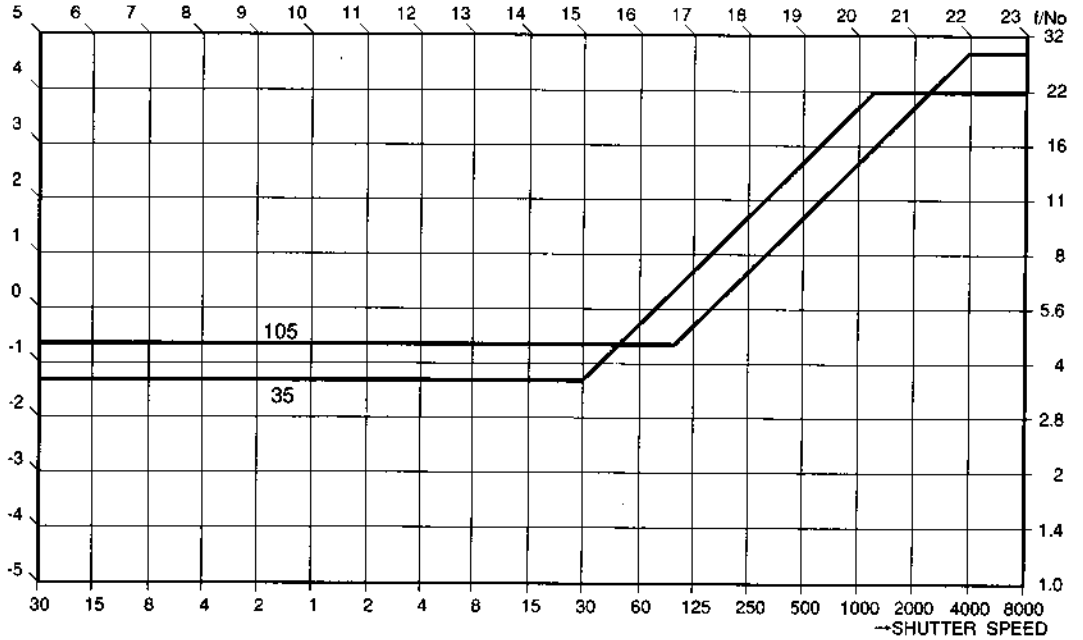


Fig 1-6 EF 50mm & EF 35-105mm Programs

4.2 EF 50MM F/1.4 PROGRAM WITH ISO RANGE

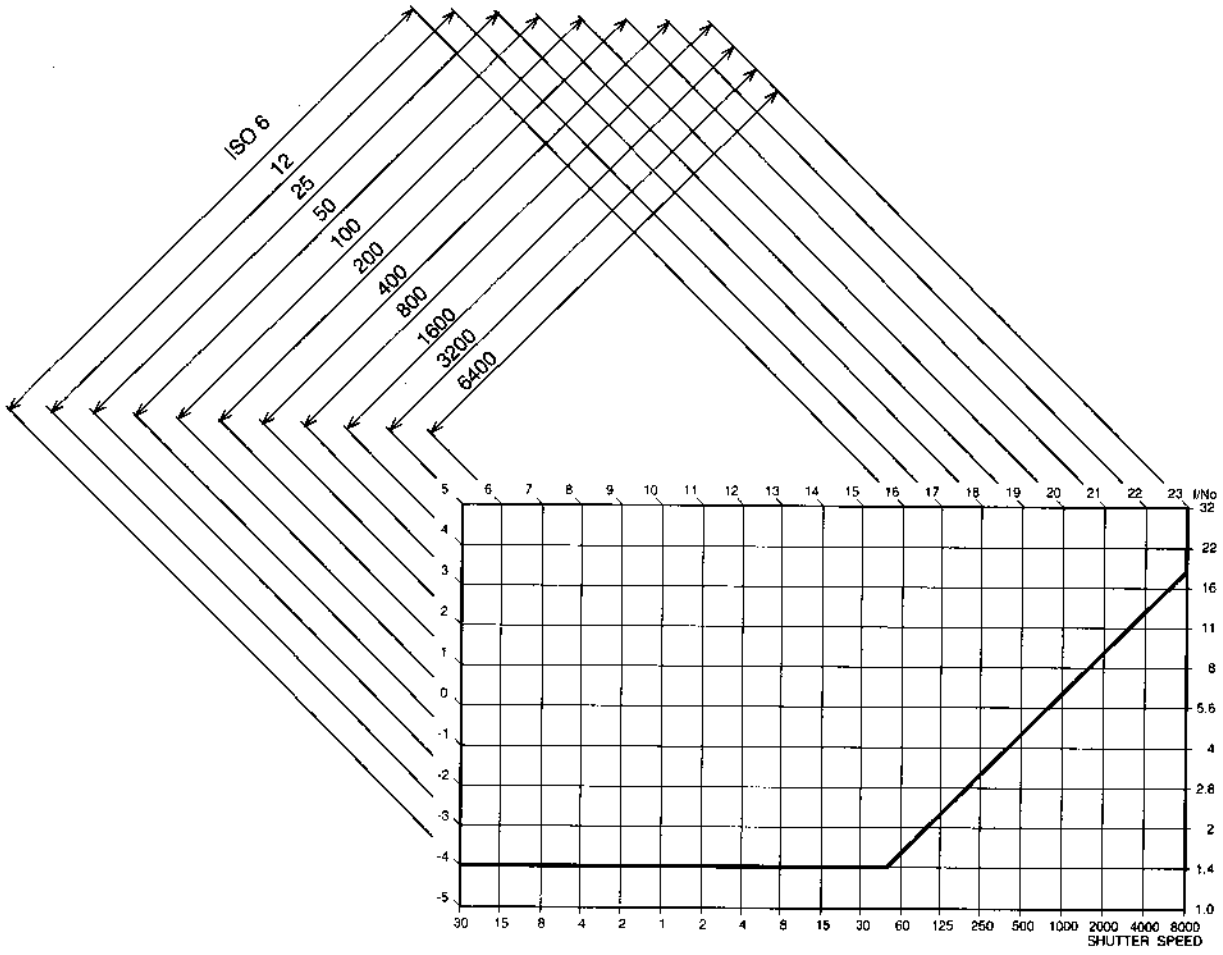


Fig 1-7 EF 50mm f/1.4 Program, with ISO Range

4.3 FLASH PROGRAMS

1. A-TTL PROGRAM

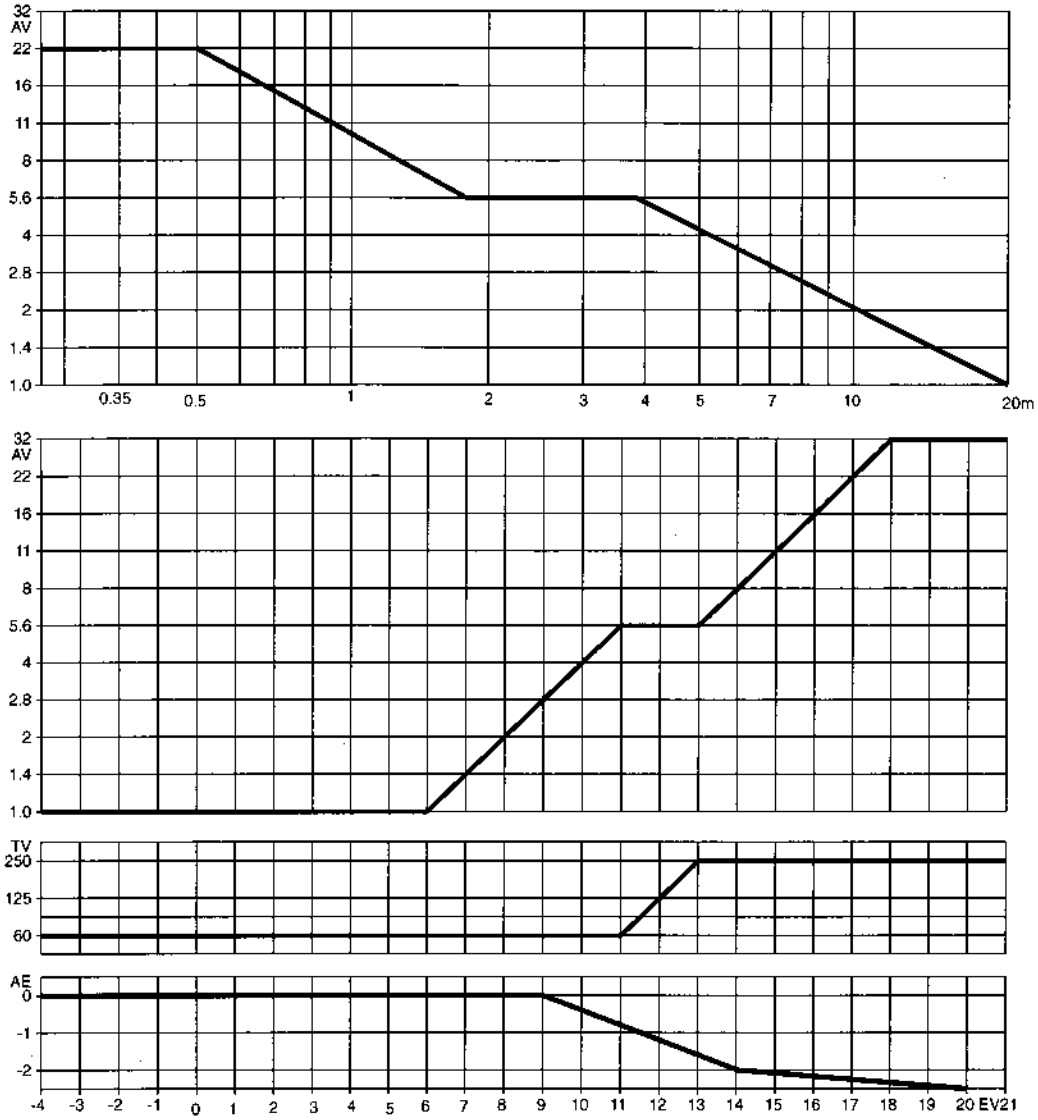


Fig 1-8 A-TTL Program

2. TTL Program Diagram

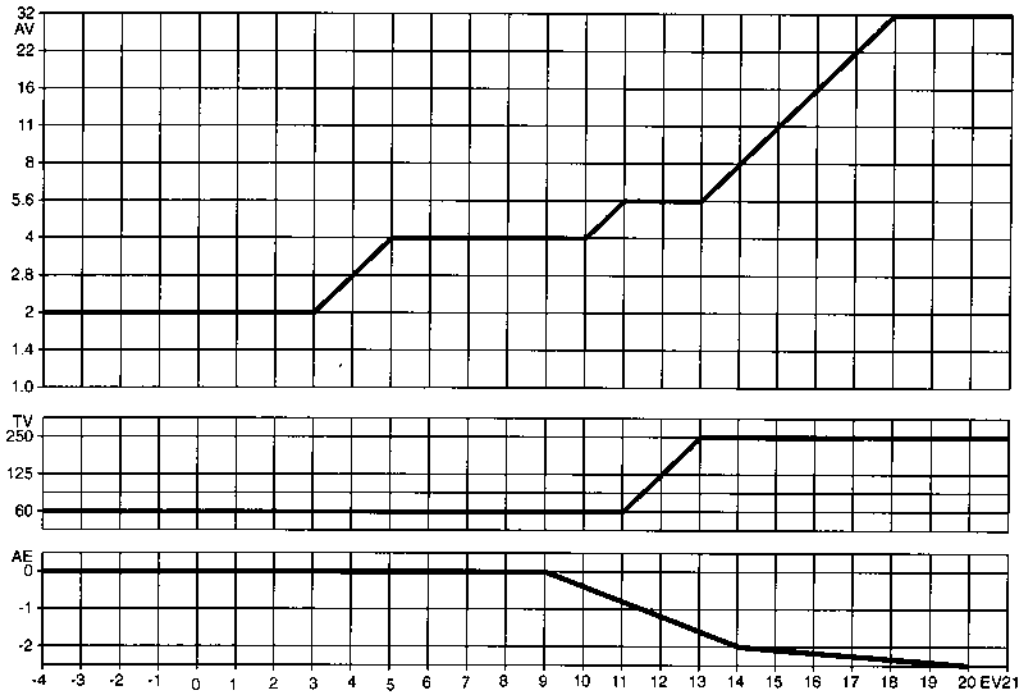


Fig 1-9 TTL Program Diagram

5. EOS SYSTEM ACCESSORIES TABLES

Compatibility: ✓: Possible ✎: Possible under certain conditions ✗: Not possible

5.1 INTERCHANGEABLE LENSES (ZOOMS)

Product name	Compatibility	Note
EF20-35mm f/2.8L	✓	
EF20-35mm f/3.5-4.5 USM	✓	
EF28-70mm f/2.8L USM	✓	
EF28-70mm f/3.5-4.5	✓	
EF28-70mm f/3.5-4.5 II	✓	
EF28-80mm f/2.8L USM	✓	
EF28-80mm f/3.5-5.6 USM	✓	
EF28-80mm f/3.5-5.6 USM II	✓	
EF28-105mm f/3.5-4.5 USM	✓	
EF35-70mm f/3.5-4.5	✓	
EF35-70mm f/3.5-4.5 A	✓	
EF35-80mm f/4.0-5.6	✓	
EF35-80mm f/4.0-5.6 PZ	✓	
EF35-80mm f/4.0-5.6 USM	✓	
EF35-105mm f/3.5-4.5	✓	
EF35-105mm f/4.5-5.6	✓	
EF35-105mm f/4.5-5.6 USM	✓	
EF35-135mm f/4.5-5.6	✓	
EF35-135mm f/4.5-5.6 USM	✓	
EF35-350mm f/4.5-5.6	✓	
EF35-105mm f/3.5-5.6L USM	✓	
EF50-200mm f/3.5-4.5	✓	
EF50-200mm f/3.5-4.5L	✓	
EF70-210mm f/4	✓	
EF70-210mm f/3.5-4.5 USM	✓	
EF75-300mm f/4-5.6	✓	
EF75-300mm f/4-5.6 USM	✓	
EF80-200mm f/2.8L	✓	
EF80-200mm f/4.5-5.6	✓	
EF80-200mm f/4.5-5.6 USM	✓	
EF100-200mm f/4.5 A	✓	
EF100-300mm f/5.6	✓	
EF100-300mm f/5.6L	✓	

5.2 INTERCHANGEABLE LENS

Product name	Compatibility	Note
EF14mm f/2.8L USM	✓	
EF15mm f/2.8 FE	✓	
EF20mm f/2.8 USM	✓	
EF24mm f/2.8	✓	
EF28mm f/2.8	✓	
EF35mm f/2.0	✓	
EF50mm f/1.0L USM	✓	
EF50mm f/1.4 USM	✓	
EF50mm f/1.8	✓	
EF50mm f/1.8 II	✓	

EF50mm f/2.5 MACRO	✓
EF85mm f/1.2L USM	✓
EF85mm f/1.8 USM	✓
EF100mm f/2.0 USM	✓
EF100mm f/2.8 MACRO	✓
EF135mm f/2.8 SF	✓
EF200mm f/1.8L USM	✓
EF200mm f/2.8L USM	✓
EF300mm f/2.8L USM	✓
EF300mm f/4.0L USM	✓
EF400mm f/2.8L USM	✓
EF400mm f/5.6L USM	✓
EF500mm f/4.5L USM	✓
EF600mm f/4.0L USM	✓
EF1200mm f/5.6L USM	✓
TS-E24mm f/3.5L	✓
TS-E45mm f/2.8	✓
TS-E90mm f/2.8	✓
EF 2X Extender	✓
EF 1.4X Extender	✓
Life Size Convertor EF	✓
Extension Tube EF25	✓
Lens Mount Convertor FD-EOS	✓
M-Lens Mount Convertor FD-EOS	✓

5.3 SPEEDLITES

Product name	**Compatibility**	**Note**
540EZ System	✓	
480EG System	✓	
420EZ	✓	
430EZ system	✓	
300EZ	✓	
200E	✓	
160E	✓	
ML-3set	✓	
Multiple flash system	✓	

5.4 BOTTOM ACCESSORIES

Product name	**Compatibility**	**Note**
GR10 (650)	✗	
GR20 (EOS620, w/remote control) terminal	✗	
GR50 (for EOS750/850/700)	✗	
GR60 (EOS10 Grip Extension)	✗	
GR70 (EOS1000 Grip Extension)	✗	
VG10 (EOS5 Vertical Grip)	✗	
GR80TP w/tripod(EOS 500)	✗	
★ *Power Drive Booster E-1*	✗	
★ *Battery Pack BP-E1*	✗	

5.5 VIEWFINDER ACCESSORIES

Product name	Compatibility	Note
Eye Cup E (650/620)	✎	Cosmetic differences only
Eye Cup Eb (750/850)	✎	Cosmetic differences only
Eye Cup Ec (EOS-1)	✓	
Eye Cup Ec-II (EOS-1N)	✓	
Eye Cup Ed (EOS-5)	✗	
Eye Cup Ed-E (EOS-5)	✗	
Dioptric Adjustment Lens E (10 kinds)	✓	
Rubber Frame Eb	✎	Cosmetic differences only
Rubber Frame Ec (EOS-1)	✓	
Rubber Frame Ed (EOS-5)	✗	
Focusing Screen E (7 types)	✗	
Focusing Screen Ec (8 types)	✎	See Precautions (Section 7)
Focusing Screen Ec-CII	✗	
Focusing Screen Ed (6 types)	✗	
Magnifier S	✓	
Angle Finder B	✓	
Angle Finder Adaptor Ed (EOS-5)	✗	
Eyepiece Extender EP-EX-15	✎	Cosmetic differences only

5.6 REMOTE DEVICES

Product name	Compatibility	Note
Remote Switch 60T3	✓	
Remote Switch RS-60E	✗	
Remote Controller RC-1	✗	
Wireless Remote Control LC-2	✓	
Wireless Remote Control LC-3	✓	

5.7 DATA BACKS

Product name	Compatibility	Note
Quartz Date Back E	✗	
Technical Back E	✗	
Keyboard Unit TB	✗	
Interface Unit TB	✗	
Command Back E1	✓	

5.8 FILTERS

Product name	Compatibility	Note
Drop-in Circular Polarizing Filter PL-C48	✓	
Circular Polarizing Filter PL-C52	✓	
Circular Polarizing Filter PL-C58	✓	
Circular Polarizing Filter PL-C72	✓	
Circular Polarizing Filter PL-C77	✓	
Drop-in Gelatin Filter Holder II	✓	
Gelatin Filter Holder E52/58/72	✓	

5.9 EOS SERIES COVERS AND CASES

Product name	Compatibility	Note
Snap Case SA-4	✗	
Snap Case SB-4	✗	
EOS650/620 cases	✗	
EOS750/850 cases	✗	
EOS 1 cases	✗	
EOS 10 cases	✗	
EOS 1000 cases	✗	
EOS 100 cases	✗	
EOS 5 cases	✗	
EOS KISS / 500 / Rebel X cases	✗	
★EOS 1N cases	✗	

5.10 MISCELLANEOUS

Product name	Compatibility	Note
Panorama Adaptor PA-1000	✗	

6. EXTERIOR VIEWS

6.1 NOMENCLATURE

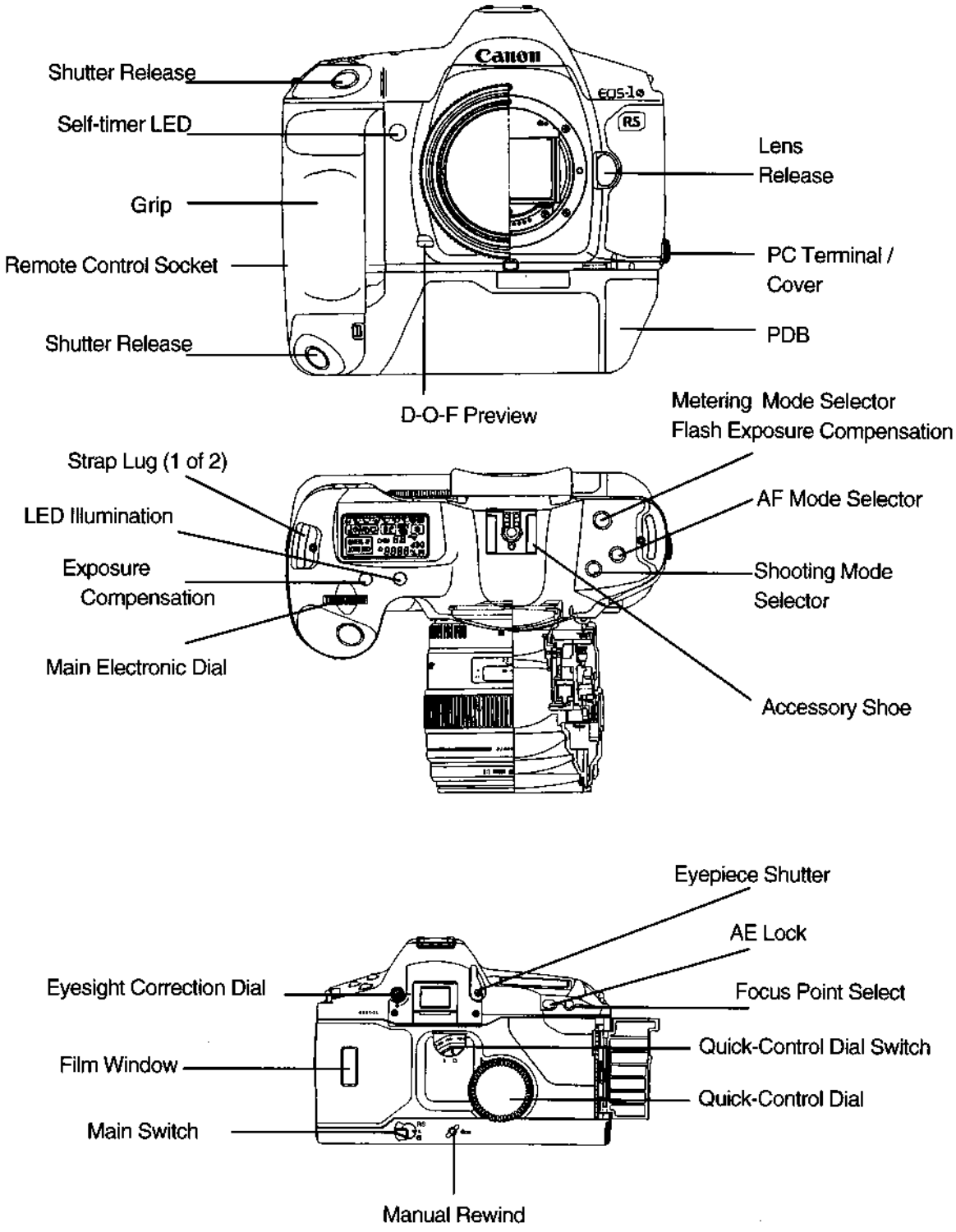


Fig 1-10 Nomenclature

6.2 DIMENSIONS

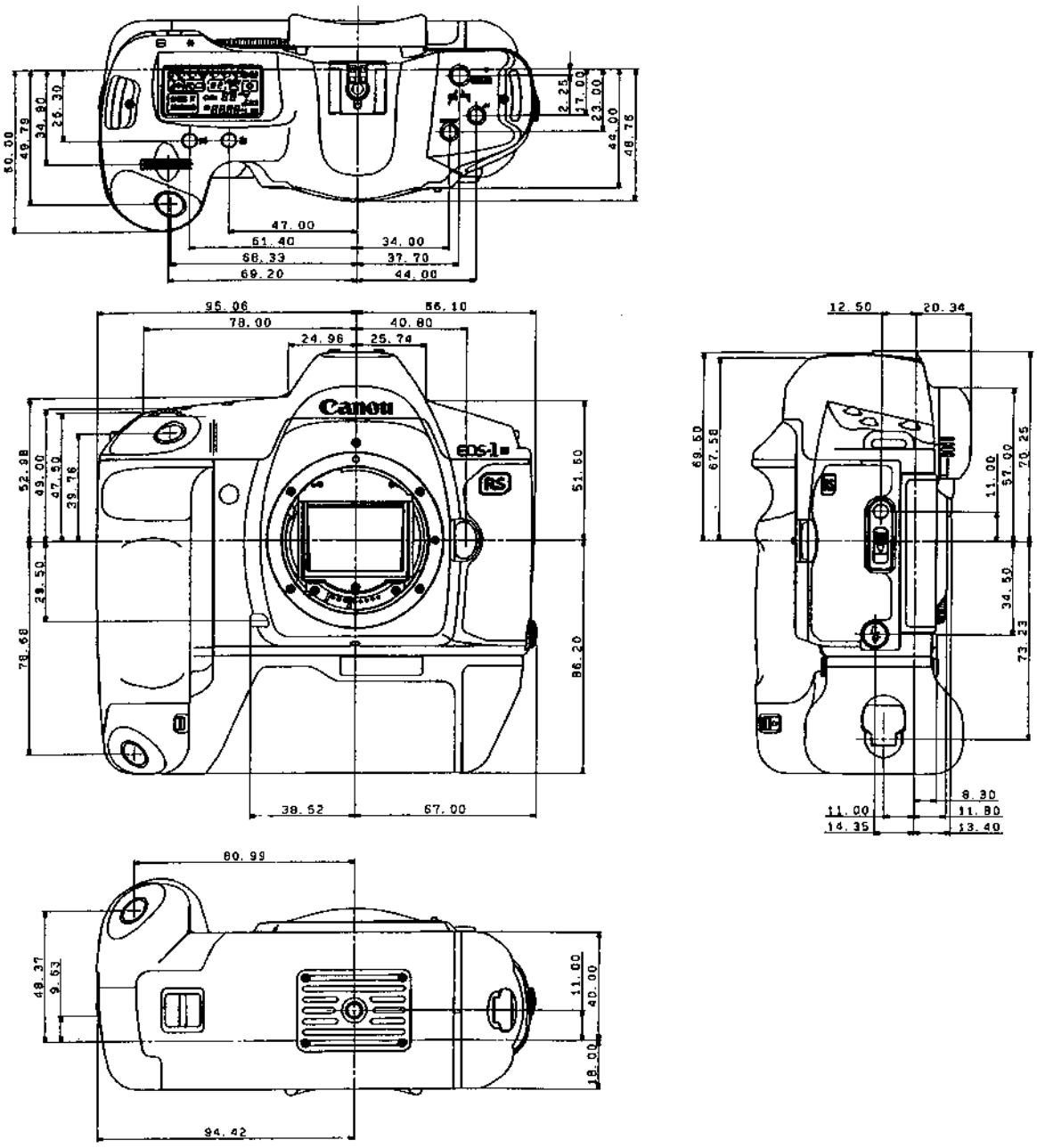


Fig 1-11 External Dimensions

7. PRECAUTIONS

- All these precautions apply only to the EOS-1N RS. Precautions listed in the EOS-1N Service Manual also apply.

1. Cleaning of the pellicle mirror with other than a blower should only be performed at an authorized service center.

   Reason: Same as with conventional glass mirrors.

2. Changing the focusing screen can be performed at an authorized service center only.

   Reason: The focusing screen cannot be changed by the user. The shape of the mask in the upper inside of the mount has been modified (the focusing screen tool insertion slot has been removed) to prevent ghosting, making it structurally impossible for the screen to be exchanged by the user.

3. The eyepiece shutter should always be closed when taking pictures without looking through the viewfinder, such as during self-timer photography.

   Reason: Light entering the camera through the viewfinder eyepiece will pass through the pellicle mirror and fog the film.

4. When using a flash in manual firing mode, the photographer should compensate the exposure to account for the reduction in light transmission (-2/3 stop) caused by the fixed pellicle mirror.

   Reason: The pellicle mirror reduces the amount of light reaching the film by about 2/3 stop compared to the EOS-1N. Manually set the aperture to a value obtained from the formula: [Nominal Guide No. x0.8] /Shooting Distance

5. When using the 480EG flash in external sensor automatic mode, the flash exposure should be compensated by +2/3 stop.

   Reason: The pellicle mirror reduces the amount of light reaching the film by about 2/3 stop compared to the EOS-1N. This can be easily done by shifting the 480EG's ISO film speed setting 2/3 of a step to a slower speed.

6. The far side of the flash shooting distance range is shortened by 20% compared to the EOS-1N.

   Reason: The pellicle mirror reduces the amount of light reaching the film by about 2/3 stop compared to the EOS-1N. At distance closer than the 20%-reduced maximum distance, the camera's TTL automatic flash system will obtain a correct exposure.

7. When using an external hand-held meter and setting the camera manually, compensate the meter reading by +2/3 stop to obtain the correct camera settings.

   Reason: The pellicle mirror reduces the amount of light reaching the film by about 2/3 stop compared to the EOS-1N. By adjusting the meter's film speed setting ahead of time to a 2/3-stop slower film speed, the meter reading can be used directly to determine the camera settings.

8. When pressing the shutter button halfway (SW-1 ON) in real-time release mode, a sound similar to the shutter release sound is heard.

   Reason: The sound is caused by the release of the shutter's rear curtain from its light-blocking position, and by the retraction of the AF sub mirror. Same as with the EOS RT.

9. With the EF50mm $f/1.0$L USM lens, the upper image area is partially vignetted.

   Reason: The vignetting is cause by the pellicle mirror's mounting frame.

10. When CF-No. 4-1 (AF activated by pressing the AE lock button) is selected in real-time release mode, the shutter button should be pressed halfway (SW-1 ON) after the autofocusing operation is completed.

    Reason: Same as with the EOS RT, the SW-1 ON operation stops down the lens aperture, which makes focusing impossible depending on the aperture (smaller apertures block the light used by the camera's AF sensor).

    While SW-1 is on, autofocus will not operate even if the AE lock button is pressed.

    •: If SW-1 is turned on by AE lock button during autofocusing operation, the aperture stops down after autofocusing is completed.

11. When using the Command Back E1, data imprinting is possible in both A and RS modes, but the data transmission system imposes the following restrictions.

    In RS mode, the maximum continuous shooting speed is reduced by about one frame/sec. even when data imprinting is not activated. When data imprinting is set, the continuous shooting is reduced even further.

    Reason: .Time is required to transmit data between the body and the Command Back E1. The continuous shooting speed differs depending on the film speed used. When ISO 64 film is used, the maximum continuous shooting speed is approx. four frames/sec.

12. Automatic Exposure Bracketing (AEB) is not possible in RS mode.

    Reason: Because priority is placed on getting the fastest possible continuous shooting speed. When the camera is set to RS mode, AEB setting is impossible If AEB is set in A mode and then the camera is switched to RS mode, AEB is canceled. AEB remains canceled even when the main switch is returned to A mode.

13. In RS mode, electronic dial input is impossible while the shutter button is pressed halfway (SW1 ON) stopping the aperture down to the working aperture.

    Reason: In this ready state, the camera will not accept main dial input such as changes to setting values (shutter speed, aperture value) or program shift, nor will it accept quick control dial input such as exposure compensation. AF activation with the AE lock button (CF-No. 4-1) is not possible in this state. Exposure compensation is possible only while the metering timer is operating.

14. In RS mode, the AF mode is automatically set to One-shot AF.

    Reason: In RS mode, since the aperture is closed down to the ready state at SW-1 ON and stays closed down during the sequence, the camera cannot perform the rangefinding signal detection necessary for AI Servo AF operation. Accordingly, when RS mode is selected, the camera automatically sets the AF mode to One-shot AF.

    If AI Servo AF mode is set in A mode and then the camera is switched to RS mode, the AF mode and its display is automatically switched to One-shot AF. When the main switch is returned to A mode, AI Servo AF mode is restored. AI Servo AF mode cannot be selected while the camera is in RS mode.

15. The EOS-1N RS is not equipped with Depth-of-Field AE (DEP) mode.

    Reason: Priority is placed on high-speed continuous shooting, DEP mode was removed to provide the necessary ROM capacity for high-speed control..

<MEMO>

Part 2

Technical Information

1. DOUBLE-SHIELDING SHUTTER

1.1 INTRODUCTION

The EOS-1N RS uses a pellicle mirror so light is passing through the lens and mirror and striking the shutter at all time when the lens cap is off. It needs even better light shielding than the EOS-1N, so a shutter with double shielding has been developed.

1.2 DOUBLE-SHIELDING SHUTTER

To provide the EOS-1N RS with light shielding equal to the EOS-1N, a mechanism that drops the second curtain half-way down the aperture during standby is used. The shutter unit's double-shielding lever is powered by the M2 motor on the mirror box through the charge unit. The second curtain is held in this position against spring pressure in the standby position. (Consequently, when the shutter unit is not installed in the camera, the second curtain is in the normal retracted position when charged.)

The EOS RT has full-aperture double shielding, but this was impossible in the EOS-1N RS due to design restrictions, but test have shown no problems even a four times the light intensity specified for cameras normally.

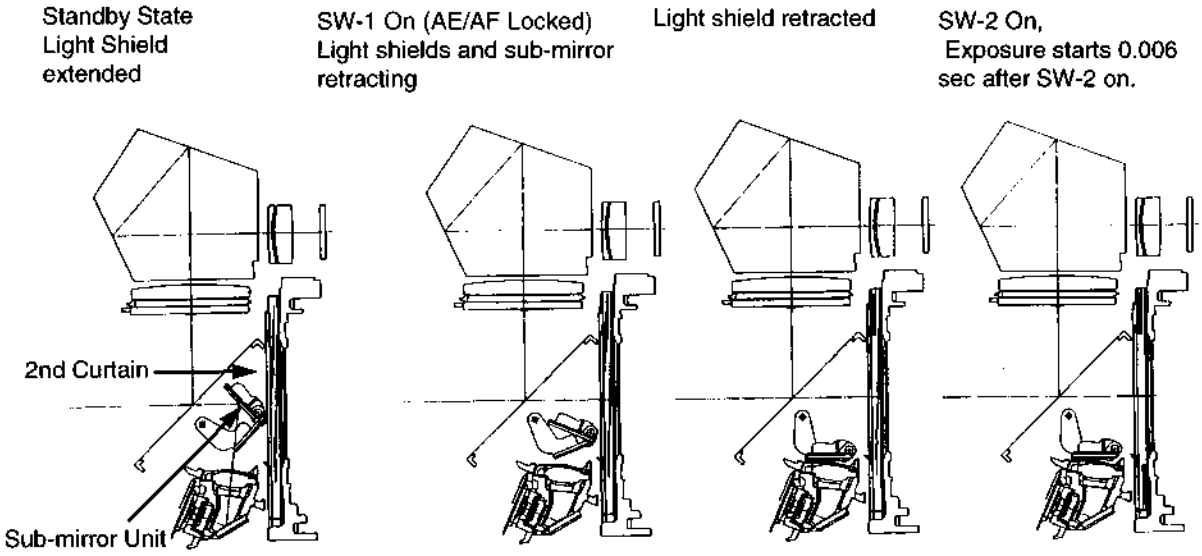


Fig.2-01 Double Shielded Shutter

2. FOCUSING SCREEN EC-R

2.1 INTRODUCTION

The EOS-1N RS uses the HC-N (New hard-coated) pellicle mirror, which divides the beam 65% to the film and 35% to the viewfinder. Compared to the EOS-1N which sends 63% of the light to the viewfinder, the RS has about one stop (actually -0.85) less light going to the viewfinder. Also affecting viewfinder brightness is the fact that, in the RS mode, the aperture stops down when SW-1 is closed instead of after SW-2.

Taking these facts into consideration, a New Lasermatte focusing screen, the Ec-R, was designed for the RT which is brighter than the Ec-CII, so the loss of viewfinder brightness is limited to only about 0.5 stops

2.2 FINDER TRANSMISSION RATIO

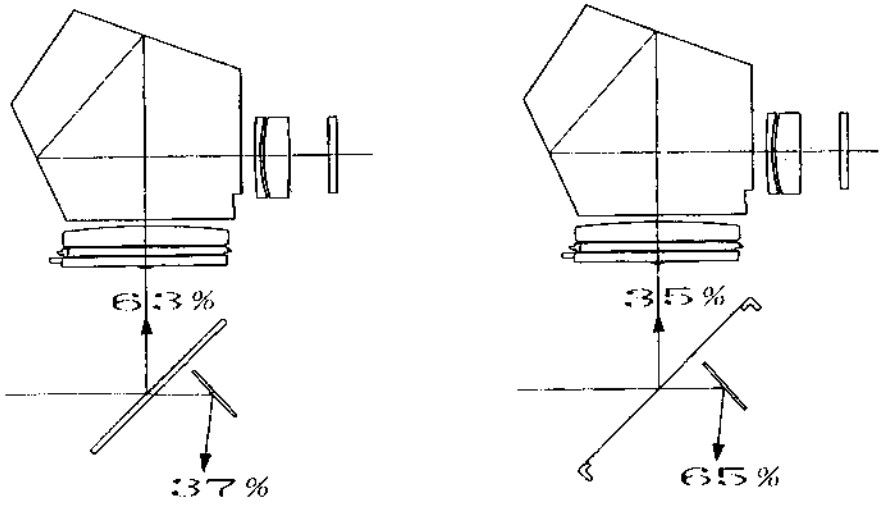


Fig.2-02 Viewfinder Comparison

2.3 Ec-R Vs Ec-CII FOCUSING SCREENS

The Ec-R gives a clear viewfinder with the EOS-1N Rs because:

- The Ec-R is about 0.5 stops brighter.
- The Ec-R's grain is not noticeable even with the lens stopped down to $f/8$ or $f/11$. The Ec-CII becomes noticeable at around $f/4$.

2.4 Ec-CII, Ec-R and Ec-K Compatibility with EOS-1 Series

1. Compatibility of three screens with the three EOS-1's is as follows:

Table 2-1 Camera / Focusing Screen Compatibility

	EOS-1N	EOS-1N RS	EOS-1
Ec-CII (Lasermatte)	✔	✎ 6	✔✎ 7
Ec-R (New Lasermatte)	✎4	✔	✎ 5
Ec-K (Bright Lasermatte)	✎2	✎3	✎1

A ✔ indicates compatibility, while the ✎ indicates some limitation and the number following it indicates which of the following notes apply.

2. Notes of Limitations

1) Note 1: EOS-1 + Ec-K

Proper Exposure

Metering / Lens	Evaluative/ Center Weighted	Partial	Spot
EF 85mm *f*/1.2L USM EF 85mm *f*/1.8 USM EF 100mm *f*/2 USM EF 200 *f*/1.8L USM	+1/3 stop	Not necessary	Not necessary
Other single focal length* lenses	+2/3 stop	+1/3 stop	Not necessary

*: With single focal length lenses shorter than 85mm, all zoom lenses, or an FD lens with the adaptor is used, the error will be large and a separate hand-held meter is recommended.

2) Note 2: EOS-1N + Ec-K

Proper Exposure

a. For Fine-spot metering, compensation is not necessary.

b. For other metering modes, metering error between -2/3 and + 1/3 stop is likely. Make test exposures to establish the proper compensation.

*: With single focal length lenses shorter than 85mm, all zoom lenses, or an FD lens with the adaptor is used, the error will be large and a separate hand-held meter is recommended.

*: The partial metering area on the screen is not the same size as the camera's partial metering area.

3) Note 3: EOS-1N RS + Ec-K

Proper Exposure

a. For Fine-spot metering, compensation is not necessary.

b. For other metering modes, metering error between -2/3 and + 1/3 stop is likely. Make test exposures to establish the proper compensation.

*: With single focal length lenses shorter than 85mm, all zoom lenses, or an FD lens with the adaptor is used, the error will be large and a separate hand-held meter is recommended.

*: The partial metering area on the screen is not the same size as the camera's partial metering area.

4) Note 4: EOS-1N + Ec-R (Standard screen for EOS-1N RS)

Proper Exposure

a, For Fine-spot metering, compensation is not necessary.

b. For other metering modes, metering error between -2/3 and + 1/3 stop is likely. Make test exposures to establish the proper compensation.

*: With single focal length lenses shorter than 35mm, all zoom lenses, or an FD lens with the adaptor is used, the error will be large and a separate hand-held meter is recommended.

5) Note 5: EOS-1 + Ec-R (Standard screen for EOS-1N RS)

Proper Exposure

a, For Spot metering, compensation is not necessary.

b. For other metering modes, the following conditions apply:

1. If the len's effective maximum aperture is larger than $f/6.7$, no compensation is necessary.
2. If the len's effective maximum aperture is smaller than $f/6.7$, exposure compensation of -2/3 stop is necessary.

*: With single focal length lenses shorter than 35mm, all zoom lenses, or an FD lens with the adaptor is used, the error will be large and a separate hand-held meter is recommended.

6) Note 6: EOS-1N RS + Ec-CII

Proper Exposure

a, For Fine-spot metering, compensation is not necessary.

b. For other metering modes, the following conditions apply:

1. If the len's effective maximum aperture is larger than $f/6.7$, no compensation is necessary.
2. If the len's effective maximum aperture is smaller than $f/6.7$, exposure compensation of +2/3 stop is necessary.

*: With single focal length lenses shorter than 85mm, all zoom lenses, or an FD lens with the adaptor is used, the error will be large and a separate hand-held meter is recommended.

7) EOS-1 + Ec-CII

a, For all metering modes, compensation is not necessary.

b. Only the spot-metering circle appears in the viewfinder.

c. The AF frames and partial metering circle do not appear in the viewfinder.

3. CUSTOM FUNCTIONS

EOS-1N Rs custom functions are the same as the EOS-1N except for CF #12.

CF#	Custom Function	Set No. & Function
1	Auto reverse	0: Yes (High speed)rewind) 1: No (High speed rewind) 2: Yes (Silent rewind) 3: No (Silent rewind)
2	Film leader after rewind	0: Wound into cartridge 1: Protruding from cartridge
3.	Film Speed Setting	0: Automatic with manual override 1: Manual setting only
4	AF operation / AE Lock:	0: AF operates on SW-1; AE locked by AE Lock 1: AF starts by AE Lock; AE locked by SW-1 2: AF start by SW-1; AF locked by AE Lock (No AE lock)
5	Manual Tv and Av setting	0: TV set by Main Dial / TV by Quick Control Dial or by pressing exposure compensation (±) button, then using main dial (with CF 11-0) 1: AV set by Main Dial / TV by Quick Control Dial or by pressing exposure compensation (±) button, then using main dial (with CF 11-0)
6.	Tv, Av and exposure correction pitch	0: Input and Correction at 1/3 stop pitch 1: Input at 1 stop, correction at 1/3 stop pitch 2: Input and Correction at 1/2 stop pitch
7	Electronic manual focusing with Ring-type USM lens	0: Manual focusing is possible without switching from AF to M 1: Manual focusing is possible only by switching from AF to M
8	Full Area Metering	0: Evaluative Metering 1: Center-weighted averaging Metering
9	AEB exposure order and cancellation	0: Under - Correct - Overexposure 1: Under - Correct - Overexposure (Not cancelled) 2: Correct - Under - Overexposure 3: Correct - Under - Overexposure (Not cancelled)
10	AF point superimposing	0: Yes 1: No
11	Focusing point selection	0: Focusing Point Selector and Main Dial 1: Exposure Comp. (±) then Main Dial 2: Quick Control Dial or Exposure Comp. (±) then Main Dial
12	AF In-focus Beeper	0: Normal - no beeper tone 1: Beeper beeps when lens is in focus.
13	Spot Metering	0: Fine-spot Metering (Basis sensor) 1: AF Focus Point Spot metering (A0 - A4 segments)
14	Flash Reduction at high EV	0: Automatic 1: None

4. ERROR CODES

If an error occurs, the camera will go into the inhibit mode and the bc mark will flash. In this condition, it is possible to determine the source of the error by simultaneously pushing the Battery Check and Clear buttons. An error number will be displayed in the frame counter frame. As with the original EOS-1, only the most recent error is displayed.

Note: Entry Numbers 6*, &*, and 9* are different from the EOS-1N.

Error #	System Error	Probable Cause
None	Unspecified error	1. Low battery(or improper Inhibit voltage adjustment) 2. System connector VCHK line, open, short, poor contact 3. MPU, FPU failure
1	Failed battery check immed-iately after mirror up	1. Exhausted battery 2. System connector contact failure
2	Failed battery check after ex-posure, before winding start.	1. Exhausted battery 2. System connector contact failure
3	No E1 when batt. installed, or an operating switch pressed	1. Failed DC/DC Convertor 2. Failed LCD Driver, Reset IC
4	Lens/Body Communications Error	1. Lens' Diaphragm Open switch failure 2. Lens' Diaphragm Open switch chattering. 3. Lens power circuit defective. 4. Body's "Lens Switch" or wiring defective, 5. T-MOS-IC defective
5	Battery Check Load error	1. RBAT1, 2, or 3 open 2. FPU defective.
6*	Sub-mirror doesn't retract at release	1. Phase board or phase board leads defective 2. Defective sub-mirror mechanism *: Error occurs if phase change not received in time.
7*	Sub-mirror doesn't extend	1. Phase board or phase board leads defective 2. Defective sub-mirror mechanism *: Error occurs if phase change not received in time.
8	Shutter Operation Trouble	1. CN2 Switch shorted. 2. CN2 Switch doesn't turn on. 3. Shutter won't hold charge 4. Damaged shutter blades.
9*	Front Panel Condition NG at power up Ex: Sub-mirror/Shutter Charge Mechanism won't charge	1. Shutter unit defective 2. Defective sub-mirror mechanism
10	Shutter Magnet Defective	1. Magnet defective 2. FPU defective. 3. MgMON(itor) line from Shutter to FPU open.
11	MPU-BASIS Comm. Error-1	MPU,FPU,I/O, or BASIS defective
12	MPU-BASIS Comm. Error-2	MPU,FPU,I/O, or BASIS defective

Part 3

Repair Information

1. PREPARATIONS FOR REPAIR

Preparations for repair are essentially the same as the EOS-1N and Power Drive Booster E-1. Refer to the EOS-1N Service Manual (CY8-1200-119) for items not included in this manual.

1.1 Buzzer Killer Short Pad

The EOS-1N has a Buzzer position on the Main Switch, but it is replaced by the RS mode on the EOS-1N RS. In the RS, the buzzer is disabled by shorting SP-2 on the main flex just under the top deck LCD.

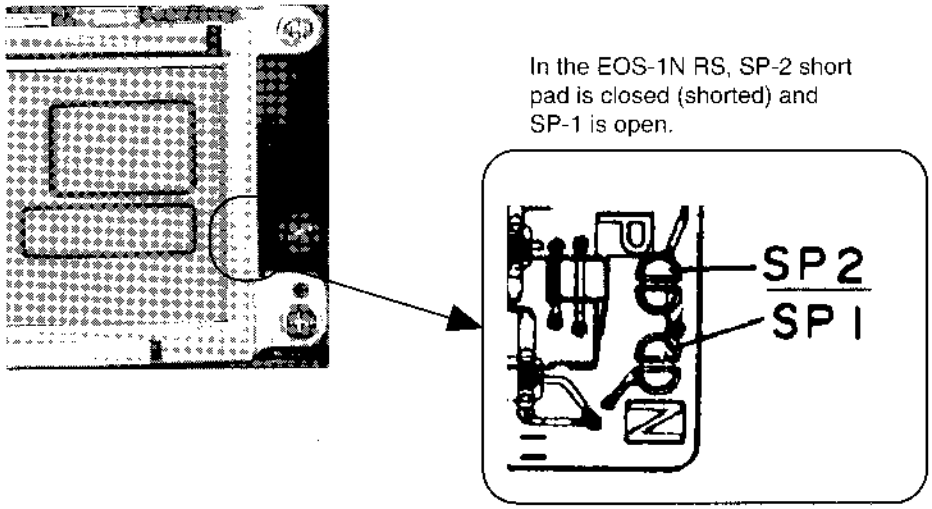


Fig. 3-00 Short Pad

1.2 Current Consumption Standard

The current consumption product standards and actual values are listed below.

Lens: EF50mm/1.8

Power source: Constant voltage source 12.8 V, 1.7Ω

	Product standard	Measured values
LOCK	75μA	about 40 μA
Standby	150μA	about 50 μA
SW1 ON	400mA	about 100mA

1.3 New Tools for the EOS-1N RS

The tools and expendables for this camera are essentially the same as the for the EOS-1N and Power Drive Booster E-1. One new tool is necessary.

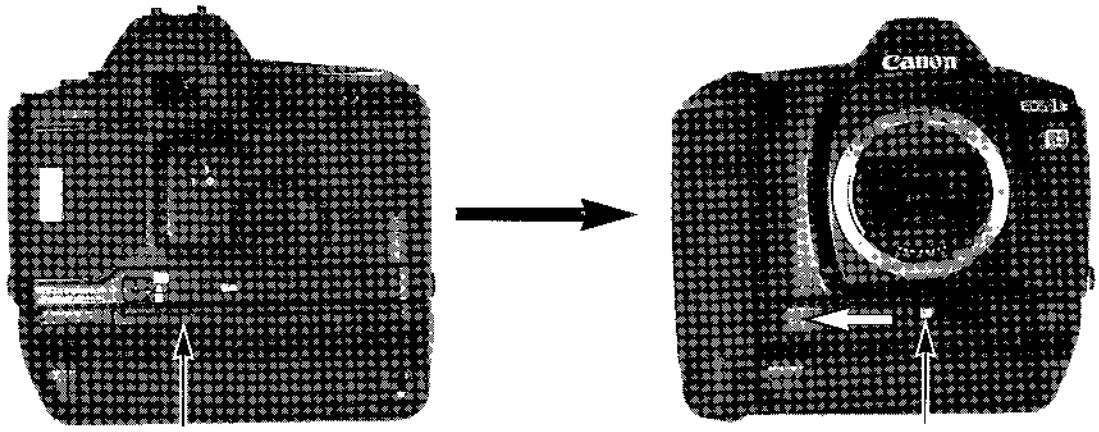
New	Test Equipment	Part No.	Adjustment
•	EOS-1N RS Spanner	CY9-6151-000	Removing Power Drive Booster component from EOS-1N RS body.

When using this tool, do not overtighten. See page 3-3 for details.

<MEMO>

2. ASSEMBLY AND DISASSEMBLY

2.1 Power Drive Booster (PDB) Section Removal



Remove the screw from the read blind plug filling the tightening knob slot and remove the front and back blind plugs.

Loosen the brass tripod now accessible through the slot with the special spanner (CY9-6151-000).

Fig. 3-01 PDB Removal

1) Removal Method

1. Remove the screw from the rear blind plug filling the tightening knob slot and remove the front and back blind plugs.
2. Loosen the brass tripod nut now accessible through the slot with the special spanner (CY9-6151-000).

2) Reassembly

Tighten the nut, being careful not to overtighten it.

CAUTION Power Drive Booster Nut Tightening
Use the special spanner (CY9-6151-000) to tighten the nut. Overtightening can cause deformation leading to changes in flange focal plane distance.

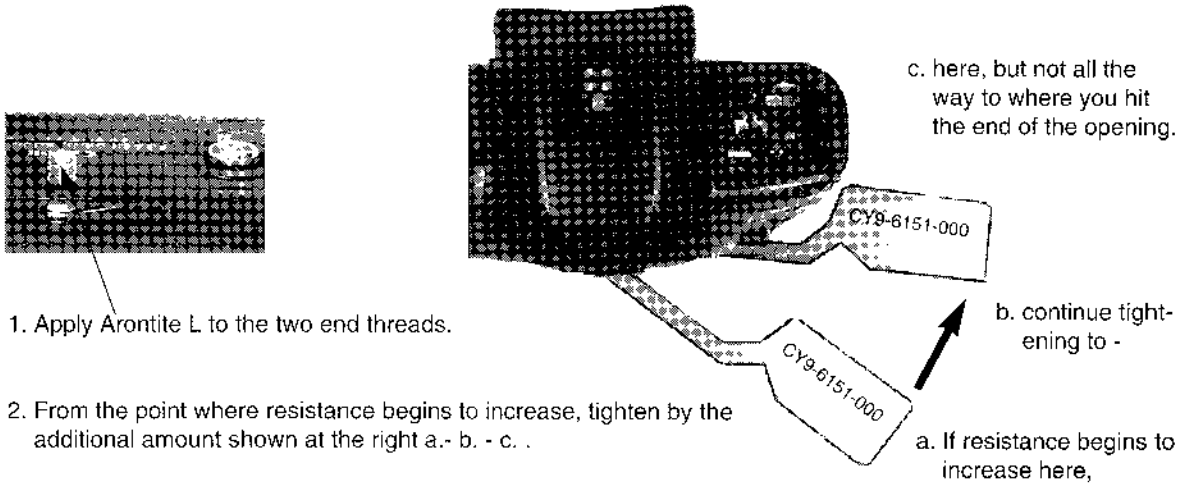

c. here, but not all the way to where you hit the end of the opening.
CY9-6151-000
CY9-6151-000
b. continue tightening to -
1. Apply Arontite L to the two end threads.
2. From the point where resistance begins to increase, tighten by the additional amount shown at the right a.- b. - c. .
a. If resistance begins to increase here,

Fig. 3-01a Nut Tightening Procedure

2.2 External Covers Removal

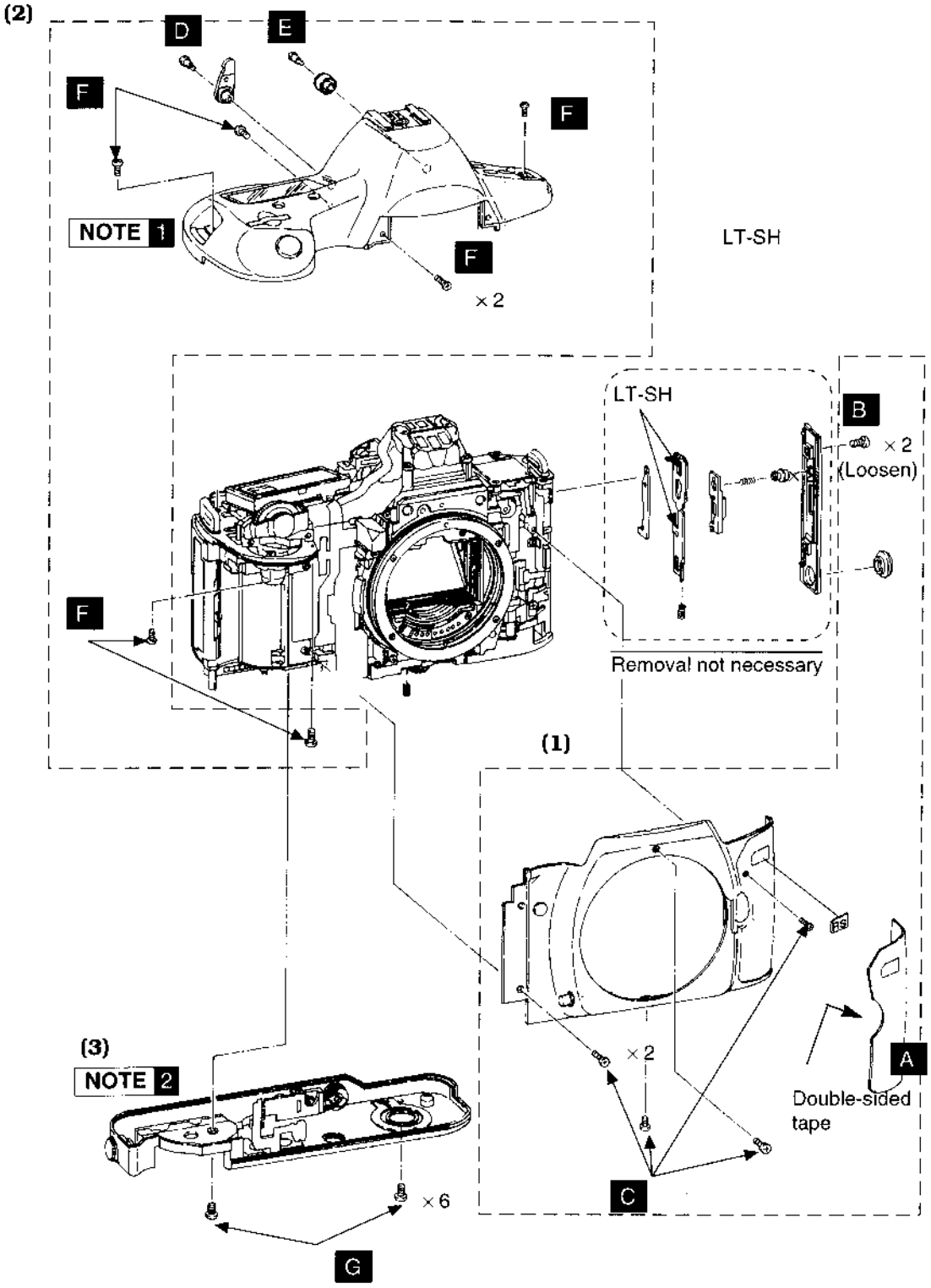


Fig. 3-02 External Covers Removal

Disassembly Procedure

1. Apron (Front Cover) Unit

   1) Remove the "leather" (A).

   2) Loosen the two latch cover screws (B), remove five screws (C) and the apron.

2. Top Cover Unit

   1) Remove the eyepiece shutter lever screw (D), and remove the lever.

   2) Remove the eyesight correction dial screw (E), and remove the lever.

   3) Remove eight screws (F), unsolder the connecting flex and eleven leads. The top cover can now be removed. Unsolder the three leads (marked with an asterisk below) from the front panel also.

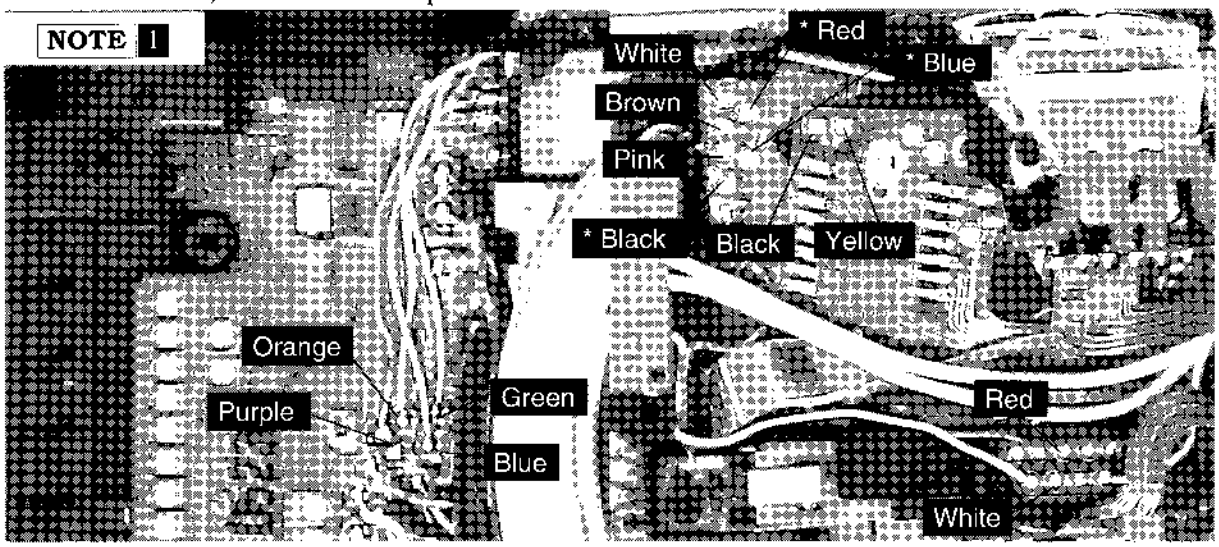


Fig. 3-03 Top Cover Leads - 1

Fig. 3-04 Top Cover Leads - 2

3. Bottom Cover Unit

   1) Unsolder the comb connector.

   2) Remove the seven screws (G) holding the bottom cover.

NOTE 2

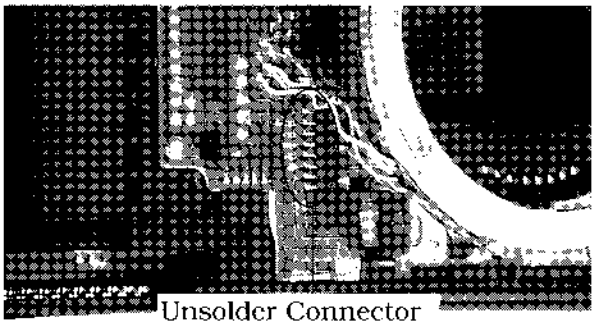


Fig. 3-05 Bottom Cover Soldering

Assembly Procedure

Check grounding between body and bottom cover.

2.3 FRONT PANEL REMOVAL -1

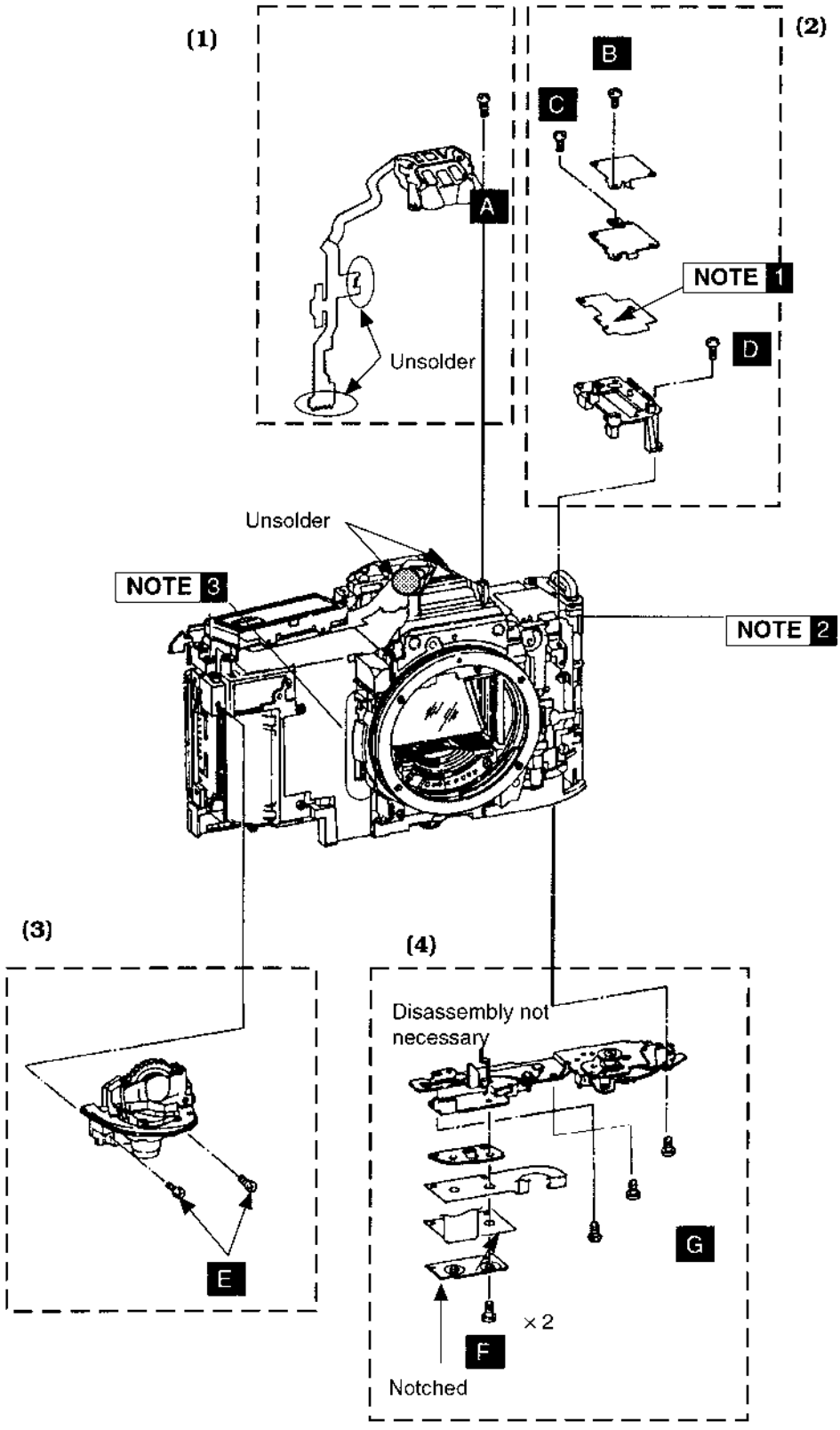


Fig. 3-06 Charge Unit Removal

Disassembly Procedure

1. Superimpose Unit

   Unsolder comb connectors at two positions shown, remove the two screws (A) holding the Superimpose Unit and remove the unit.

2. Mode Base

   1) Remove the screw (B) holding the CD Flex.
   2) Remove the screw (C) from the Mode Switch Base 1 and remove the base.
   3) Unsolder four leads from the CD Flex and the PC terminal twin-lead.
   4) Remove the screw (D) from the Mode Switch Base2 and remove the base.
   5) Unsolder the CD Flex comb connector and the BACK Switch thru-hole pins

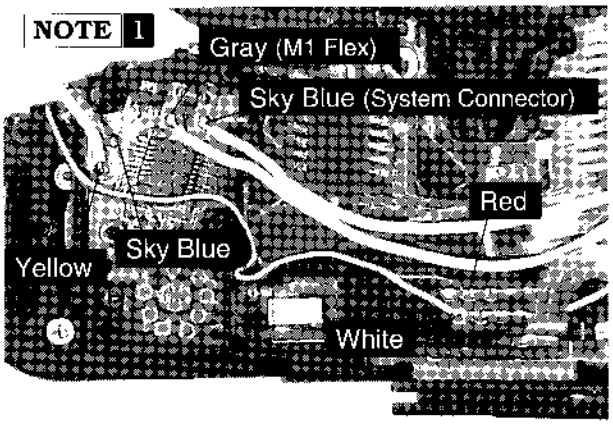


Fig. 3-07 Mode Switch Leads

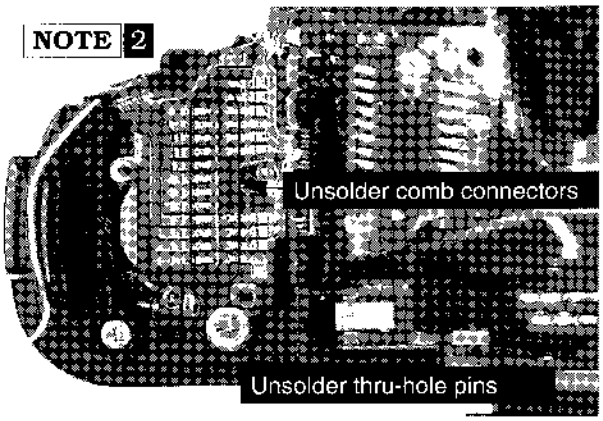


Fig. 3-08 Mode Switch Soldering

3. Electronic Dial Unit

   Remove the two screws (E) from the Electronic Dial Unit. Unsolder five lead wires and one shield and remove the Electronic Dial Unit.

4. Charge Unit

   1) Remove the two connecting screws (F) between the Main Flex and the AF Unit.
   2) Unsolder the Charge Unit comb connector.
   3) Remove three screws (G) and remove the Charge Unit.

5. Back Cover Unit

   Remove the back cover unit.

6. Main Flex

   1) Unsolder comb connector (I) to Lens sensor switch.
   2) Remove four leads from the Main Flex (J), and three leads at (K), and one gray lead to the Eyepiece Unit (G). Remove the Main Flex.

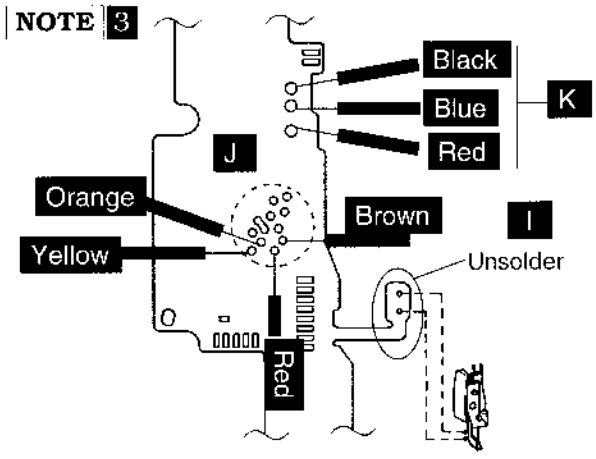


Fig. 3-09 Main Flex Soldering

2.4 FRONT PANEL REMOVAL-2

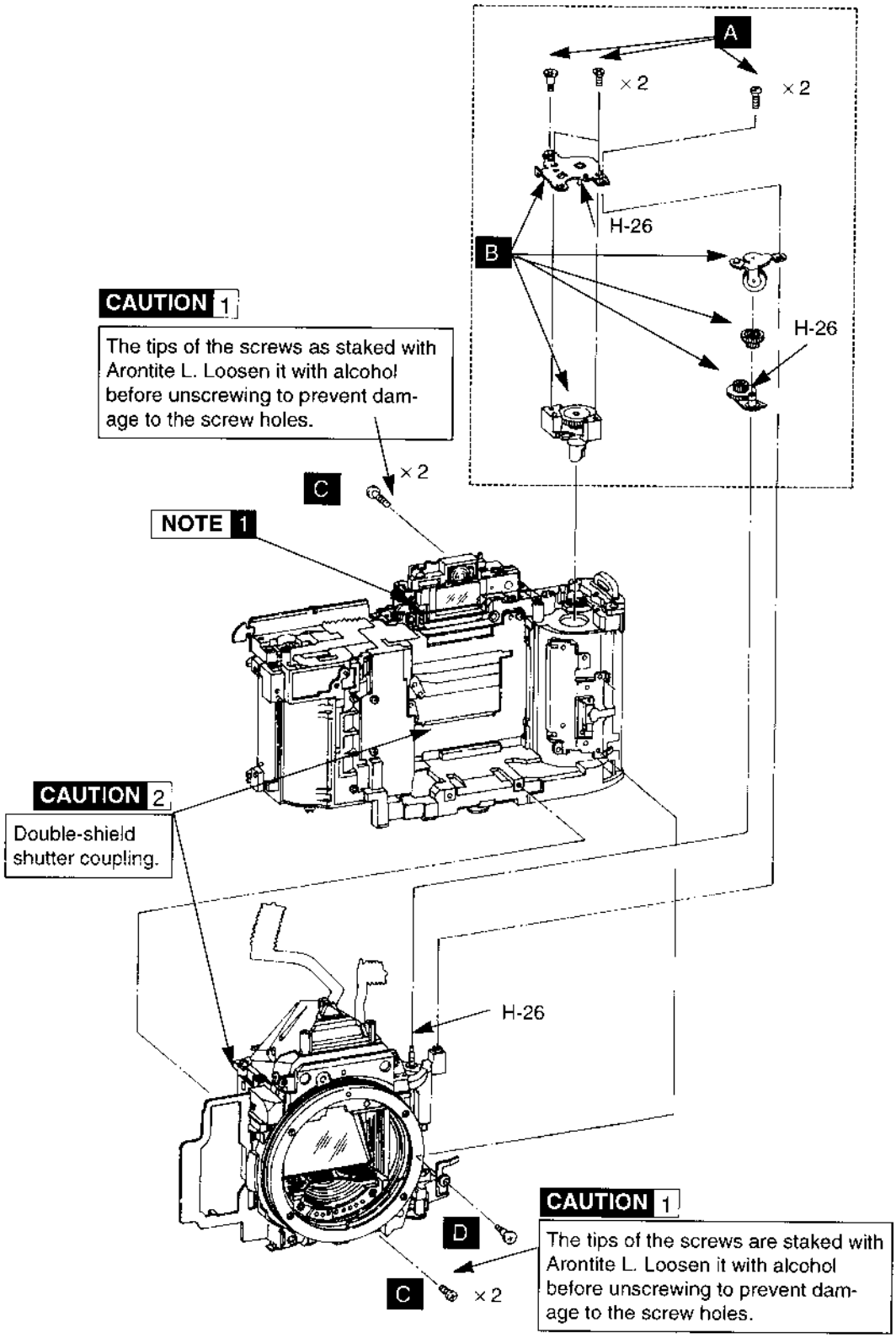


Fig. 3-10 Mirror Box Removal

Disassembly Procedure

1. Rewind Gear Train
   Remove the five fork holder screws (A) and the gear train parts (B).
2. Mirror Box
   Remove the four screws (C) and one (D) and remove the mirror box.

Assembly Procedure

1. To check for correct double shielding (2nd curtain partially extended during stand-by) and the check proper coupling of the double-shielding levers, remove the Wing and pellicle mirror when installing the mirror box. levers
2. When reinstalling the four screws (C), apply Arontite L to the tips just before tightening them.

CAUTION 1 **If the screws (C) have been loosened**, replace the screws with new screws.

NOTE 1 After installing the mirror box, apply Silicone Bond KE347B to the joint between the mirror box and body.

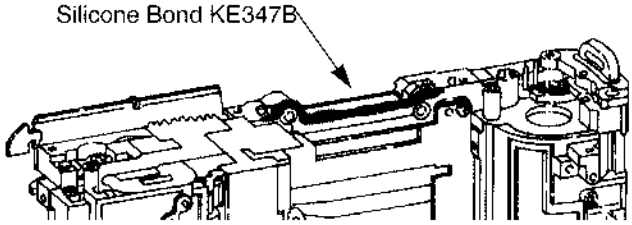


Fig. 3-11 Body/Mirror Box Seal

CAUTION 2 Both the Shutter Unit and Charge Unit must be charged before they are installed. Also, the double-shielding coupling parts (A) of the Shutter Unit and Shutter Drive Unit must be correctly mated. If all parts are correctly coupled, the second curtain will be extended down into the aperture to act as double shielding.

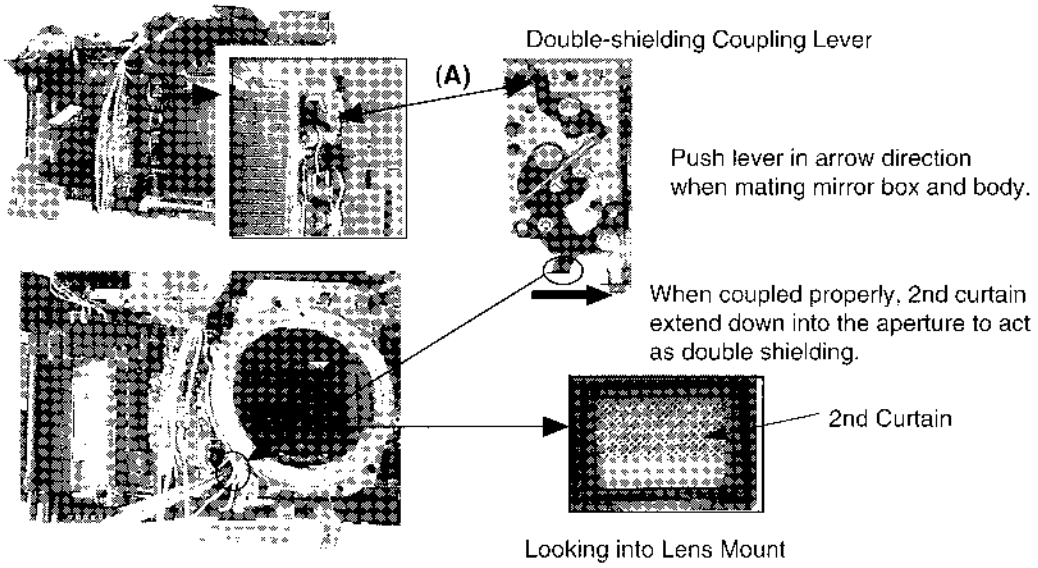

Double-shielding Coupling Lever
(A)
Push lever in arrow direction when mating mirror box and body.
When coupled properly, 2nd curtain extend down into the aperture to act as double shielding.
2nd Curtain
Looking into Lens Mount

Fig. 3-12 2X Shield Assembly

2.5 Main Flex Removal

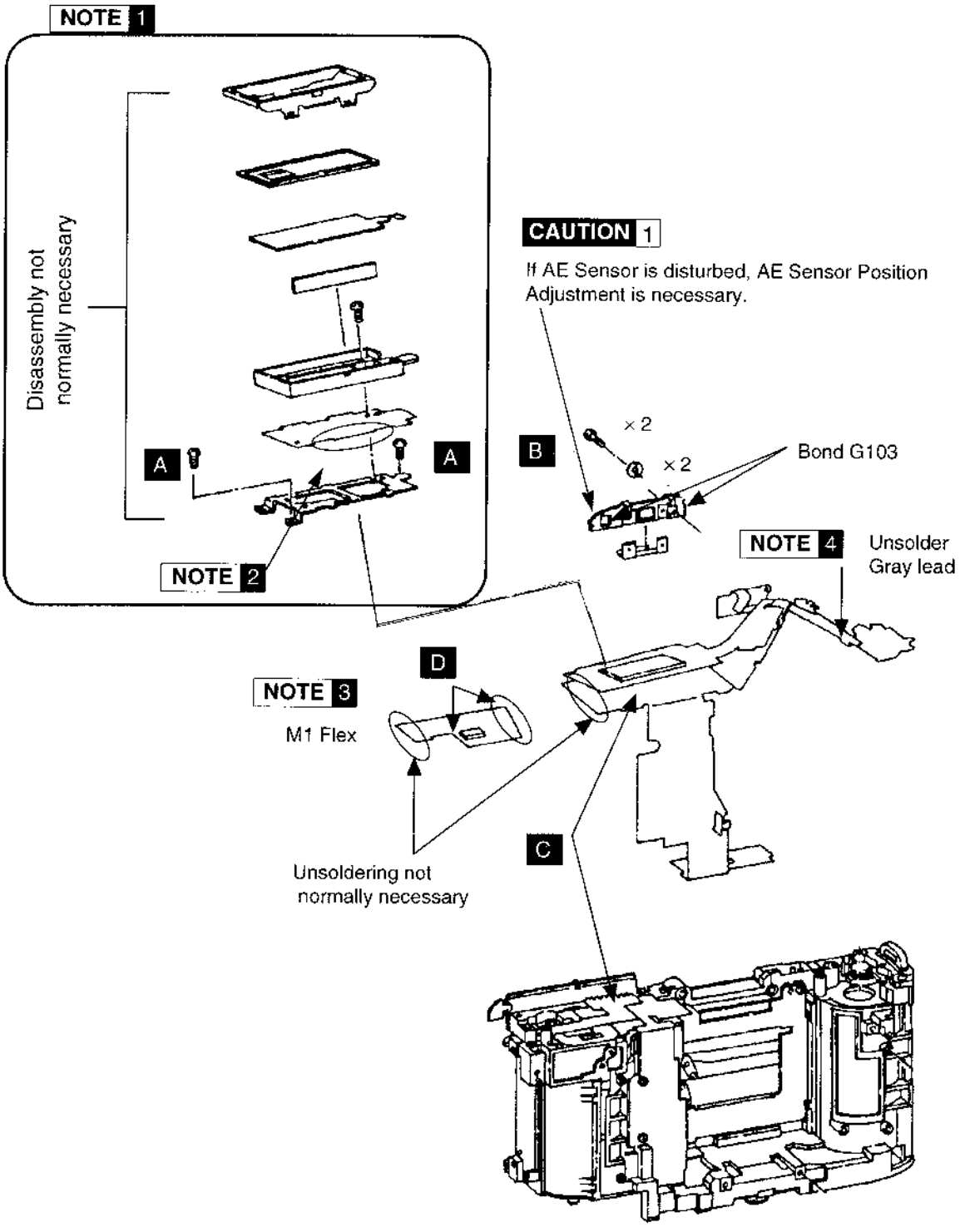


Fig. 3-19 Top-deck LCD (OLC) Removal

Disassembly Procedure

1. Top-deck LCD (OLC) Unit Removal (Disassembly not normally necessary)

   1) Remove the shielded lead to the illumination panel (EL).

   2) Remove the three screws (A) holding the OLC and lift it up.

NOTE 1

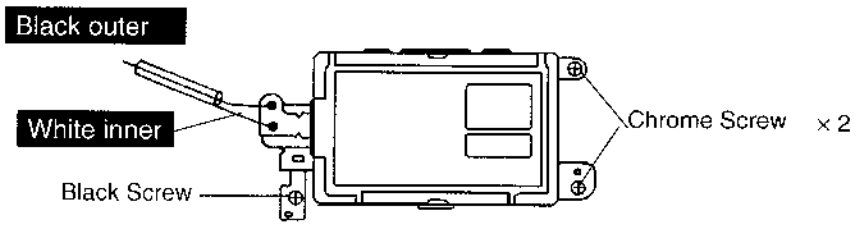


Fig. 3-14 Illumination Panel (EL) Lead Removal

2. Electronic Dial Leads Removal

Remove the five normal and one shielded lead from the Electronic Dial Unit.

NOTE 2

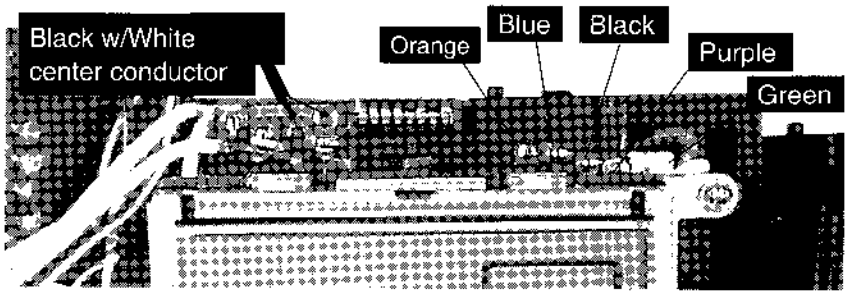


Fig. 3-15 Electronic Dial Lead Removal

3. Metering Sensor

   Remove the two screws (A) , carefully place a flat blade screwdriver between the sensor holder and the body and pry the holder off.

4. M1 Flex leads, Shutter/DC-DC Convertor (SDC) L Flex and G Flex Connections

   1) Unsolder the connection between the SDC Flex and the Main Flex (B), and between the G Flex and Main Flex (also B) .

   2) Unsolder the seven leads on the M1 Flex (C) and and one lead from the SDC Flex.

NOTE 3

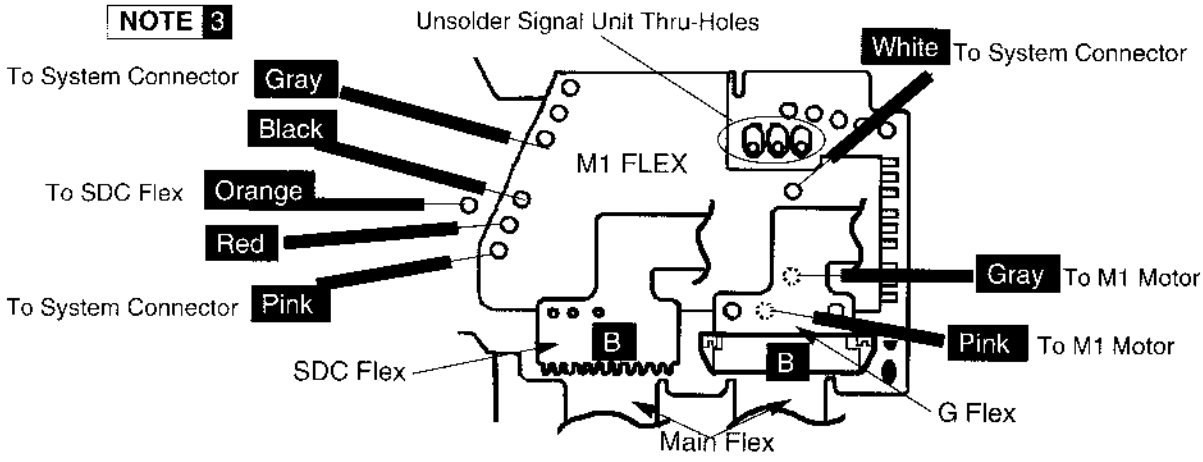


Fig. 3-16 M1 Flex Connections

2.6 Shutter Unit Removal

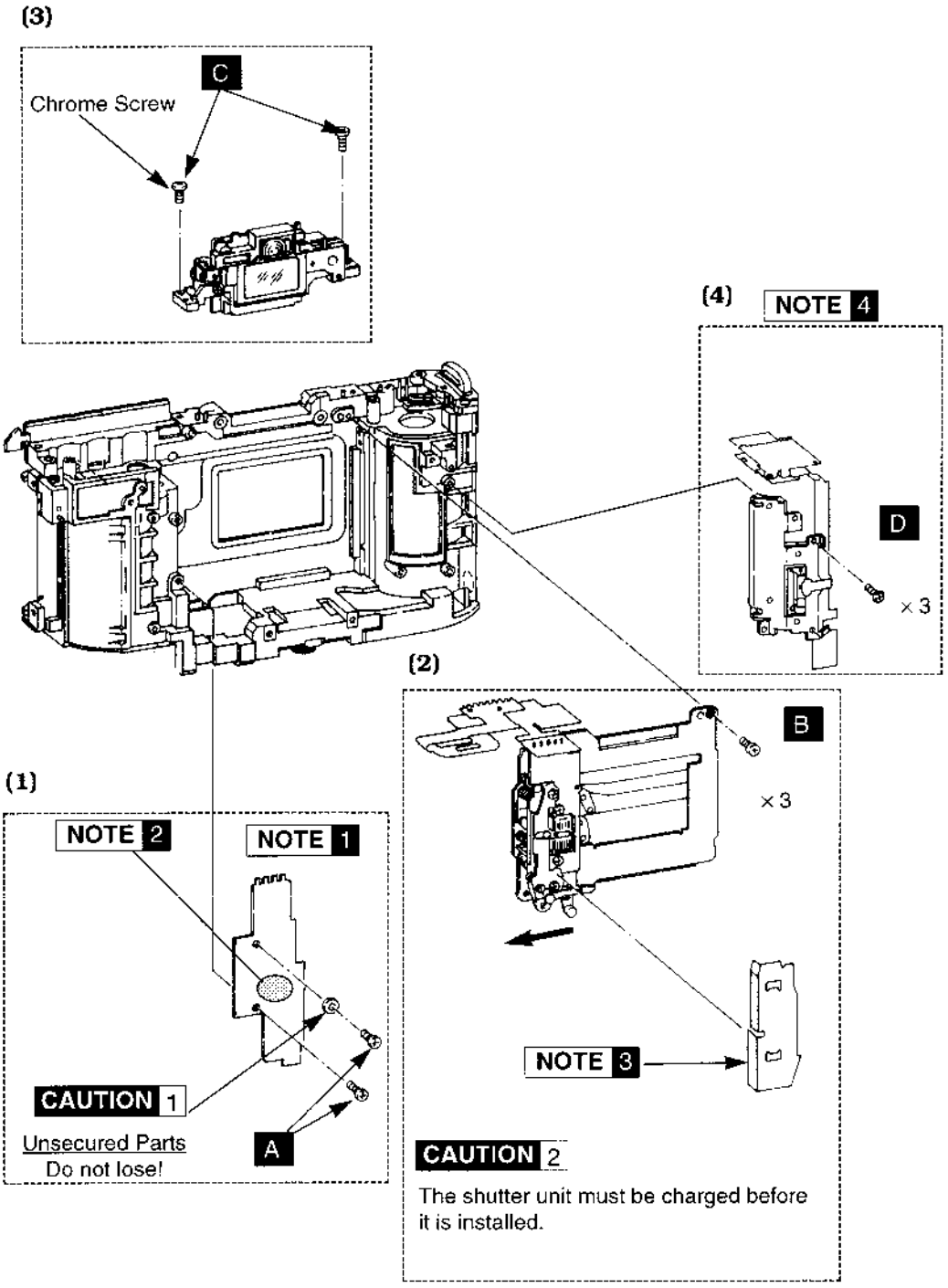


Fig. 3-17 Shutter Removal

Removal Procedure

1. DC/DC Connector
   Unsolder three leads from the DC/DC Convertor, and the SDC Flex connection.
   Remove two screws (A) and remove the DC/DC Convertor.

NOTE 1

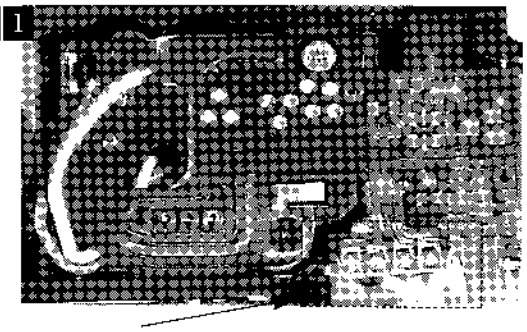


Fig. 3-18 SDC Flex Soldering

NOTE 2

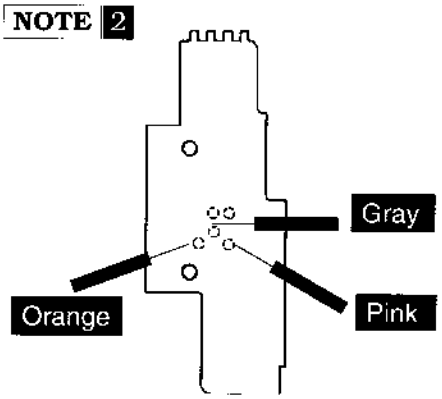


Fig. 3-19 DC/DC Leads

2. Shutter Unit
   Remove three screws (B) and remove the shutter unit.
3. Eyepiece Unit
   Remove two screws (C) and remove the eyepiece unit.
4. DX Unit
   Remove two screws (d) and remove the DX unit.

Reassembly Cautions

Insulating Tape Placement

NOTE 3

Install insulating tape as shown to prevent breaking the X sync lead and dust entry.

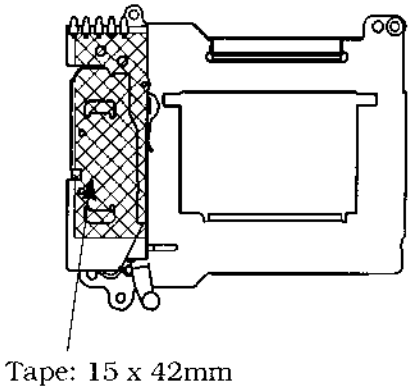


Fig. 3-20 Shutter Tape

NOTE 4

To prevent shorting of the M2 lead, apply insulating tape as shown below (8 x 12mm).

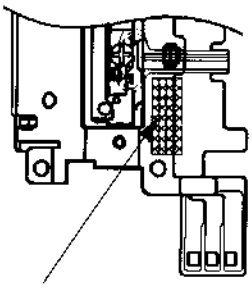


Fig. 3-21 DX Tape

2.7 Film Transport Parts Removal

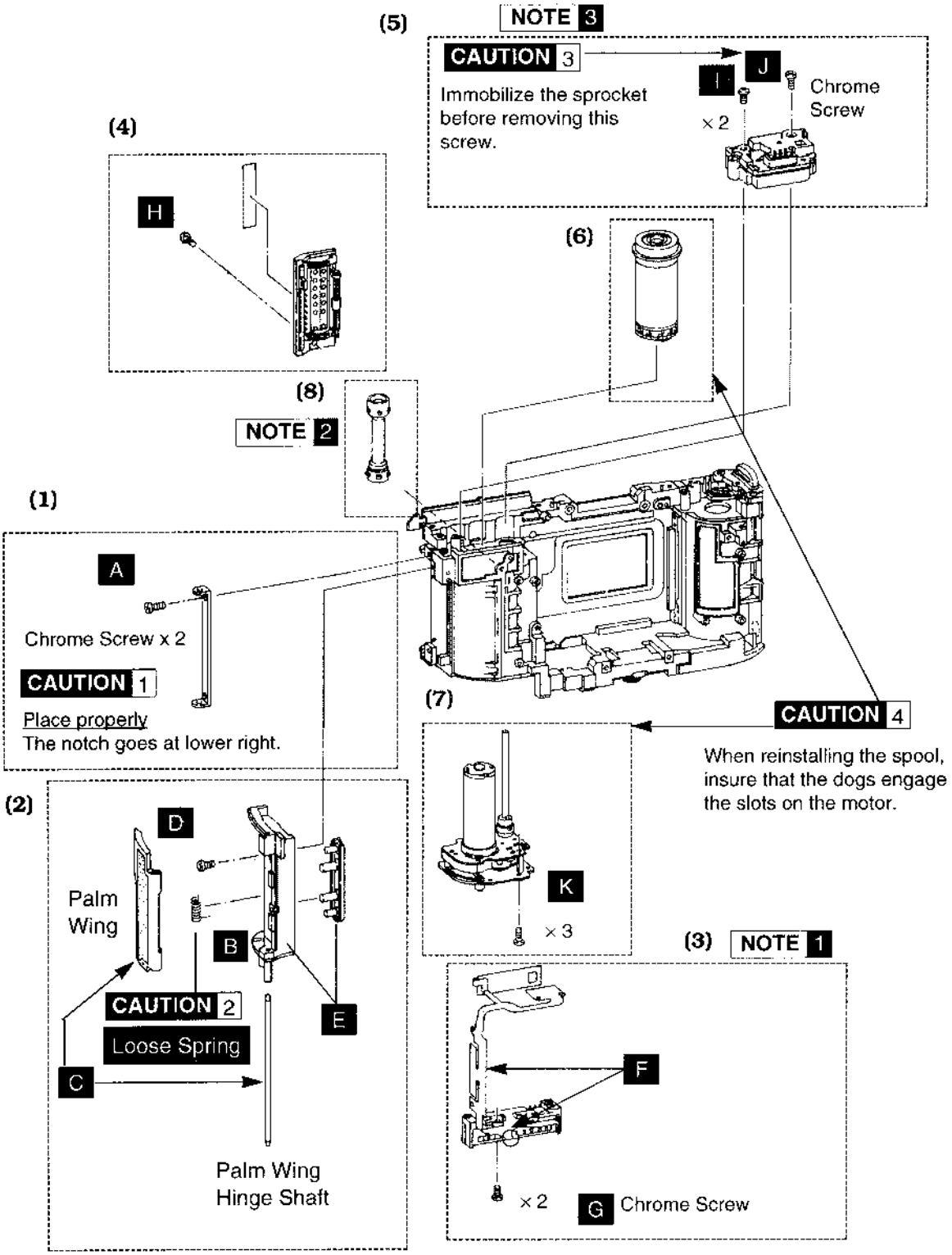


Fig. 3-22 Film Transport Parts Removal

Removal Procedure

1. Back Cover Hinge Bracket
   Remove two screws (A) and remove the back cover hinge bracket.
2. Palm Wing
   1) Unhook the spring (B) and remove the shaft, spring and palm wing (C).
   2) Remove two screws (D) and remove the switch panel and switch rubber (E).
3. System Connector Unit
   Unsolder the Thru-hole pins at two positions (F), remove two screws (G) and remove the system connector unit.
4. Roller Holder Unit
   Remove the two screws (H), and remove the roller holder unit.
5. Signal Unit
   Remove the two screws (I) and the sprocket screw (J), and remove the signal unit.
6. Spool
   Move the AL guide holder out of the way and remove the spool.
7. Film Advance Unit
   Remove the three screws (K) and remove the film advance unit (winding motor).
8. Sprocket
   The sprocket is now free. Remove it.

Reassembly Cautions

1. Tape Installation

To prevent possible shorting to the base cover, cover the Reset switch connections with insulating tape after soldering them.

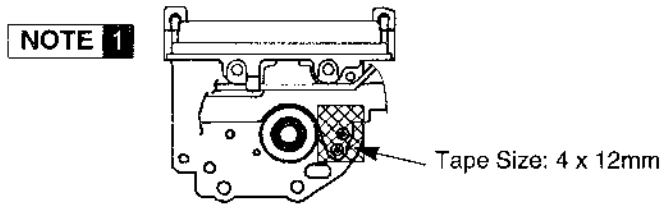


Fig. 3-23 Reset Switch Tape

2. Lubrication

NOTE 2 Apply H-26 to the inside upper part of the sprocket as shown.

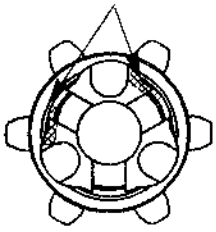


Fig. 3-24 Sprocket Lube (H-26)

NOTE 3 Apply H-26 to the Spool mating surfaces on the underside of the signal base.

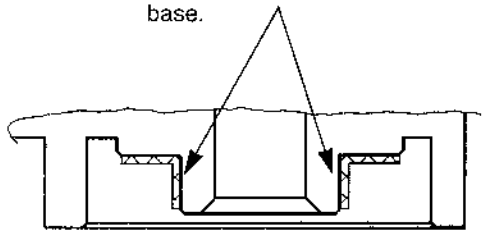


Fig. 3-25 Signal Base Lube (H-26)

2.8 Mirror Box Disassembly - 1

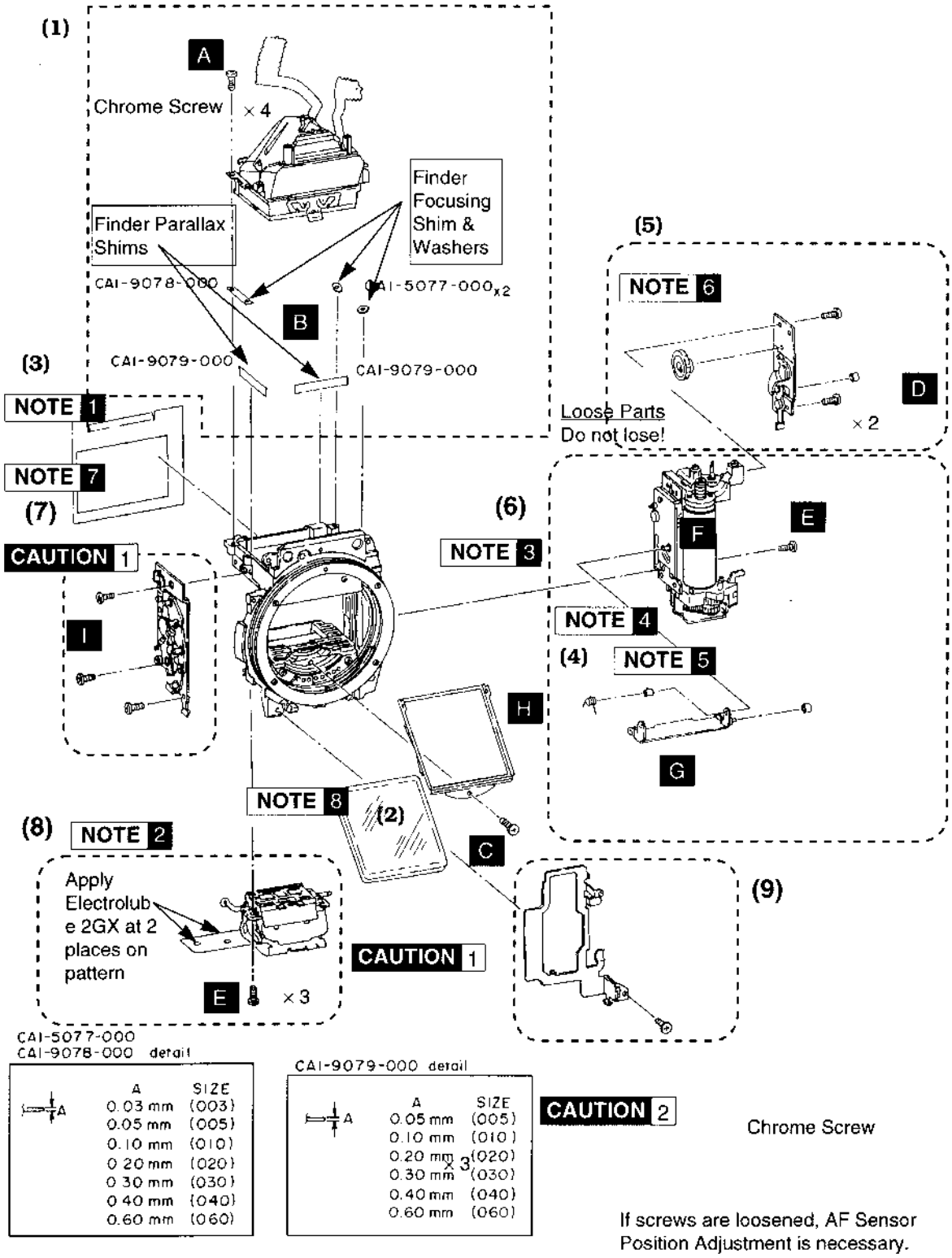


Fig. 3-26 Mirror Box Disassembly - 1

Removal Procedure

1. Pentaprism Unit
   Remove four screws (A), the pentaprism, and the finder focus and finder parallax shims and washers (B).
2. Pellicle Mirror
   Remove the screw (C) and remove the pellicle mirror.
3. Light Shield
   The light shield is bonded in place. Loosen it with alcohol before removing.

NOTE 1

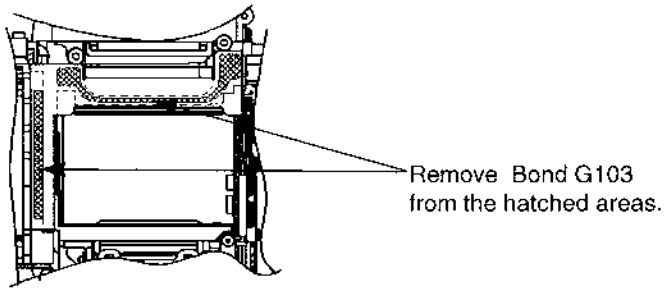


Fig. 3-27 Light Shield Bonding

4. Remove the sub-mirror drive spring,being careful not to lose the collar.
5. Sub-mirror Mechanism
   Remove the sub-mirror mechanism,being careful not to lose the mirror cam gear.
6. M2 Motor Unit
   Remove screw (E) and M2 motor unit (F). At this time, sub-mirror unit (G) and pellicle mirror frame (H) can also be removed.
7. Shutter Drive Unit
   Remove four screws (I) and the shutter drive unit.
8. AF Unit (If removed, adjustment is necessary)
   Unsolder the connector (see drawing) and three screws (E), and remove the AE unit>

NOTE 2

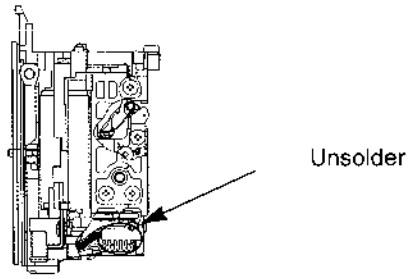


Fig. 3-28 AF Unit Desoldering -2

9. Wing
   Remove two screws (D) and remove the wing.

Assembly Cautions

1. If the AF unit is disturbed, the AF Sensor Positioning Adjustment is necessary (See the mechanical adjustments section.
2. Lubricant Application

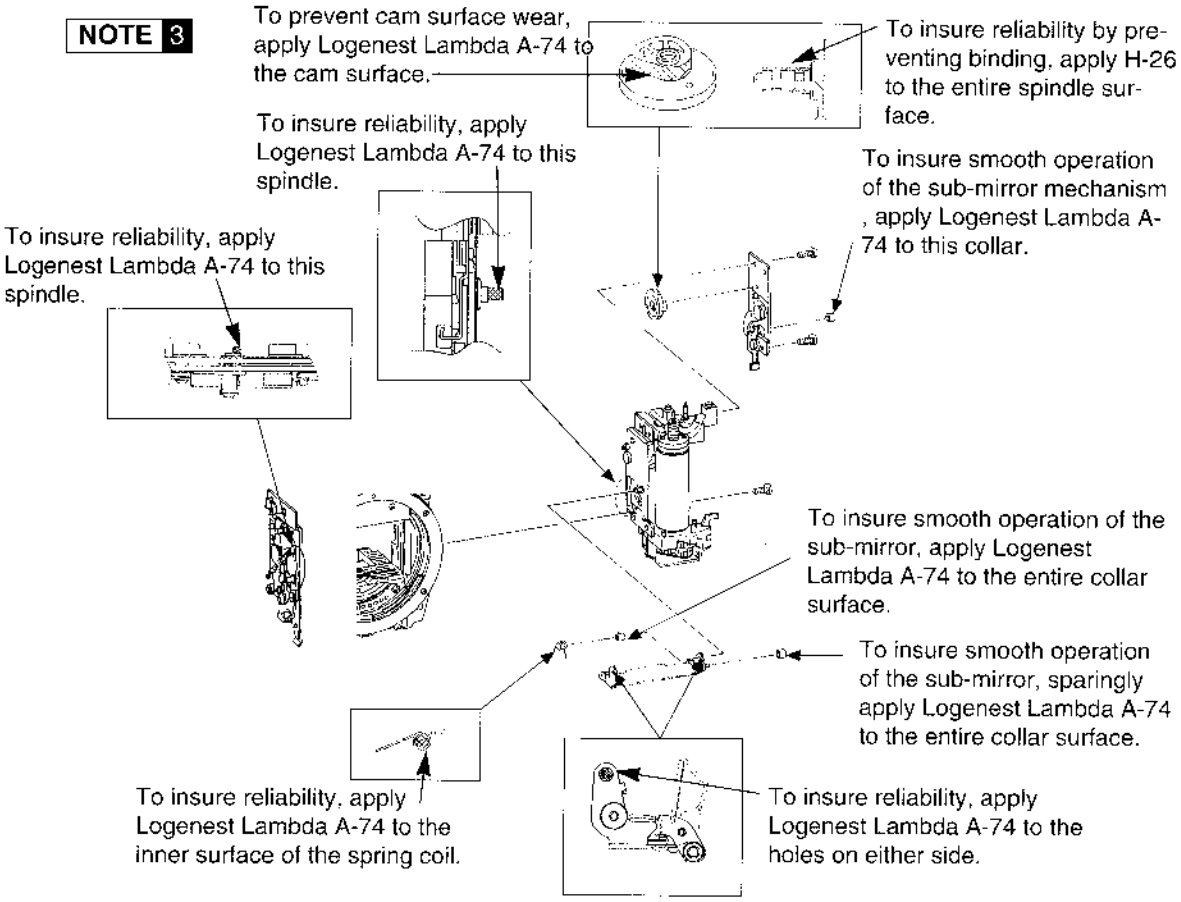

NOTE 3
To prevent cam surface wear, apply Logenest Lambda A-74 to the cam surface.
To insure reliability by preventing binding, apply H-26 to the entire spindle surface.
To insure reliability, apply Logenest Lambda A-74 to this spindle.
To insure smooth operation of the sub-mirror mechanism , apply Logenest Lambda A-74 to this collar.
To insure reliability, apply Logenest Lambda A-74 to this spindle.
To insure smooth operation of the sub-mirror, apply Logenest Lambda A-74 to the entire collar surface.
To insure smooth operation of the sub-mirror, sparingly apply Logenest Lambda A-74 to the entire collar surface.
To insure reliability, apply Logenest Lambda A-74 to the inner surface of the spring coil.
To insure reliability, apply Logenest Lambda A-74 to the holes on either side.

Fig. 3-29 Mirror Box Lubrication - A

3. When installing the sub-mirror, insure that the collar and spring are positioned as shown.

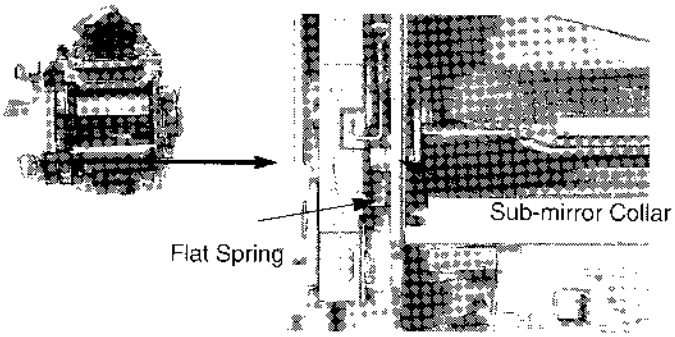


Fig. 3-30 Sub-mirror Installation

4. Sub-mirror Spring Position

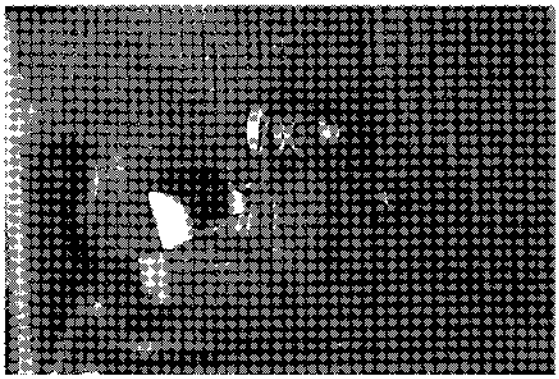


Fig. 3-31 Sub-mirror Spring

5. Sub-mirror Mechanism Installation
   Set the mechanism as shown before tightening the screws.

After installation, insure that the sub-mirror retracts when the cam gear turns.

Fig. 3-32 Lever Position

6. Attach the mirror box light shield.

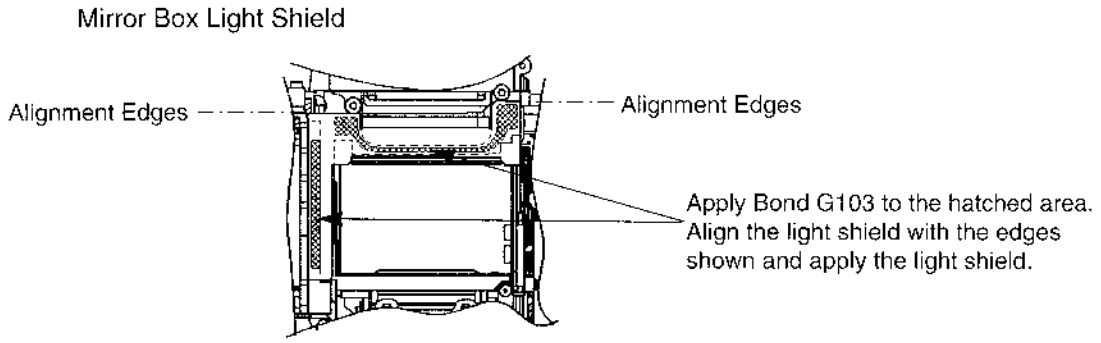
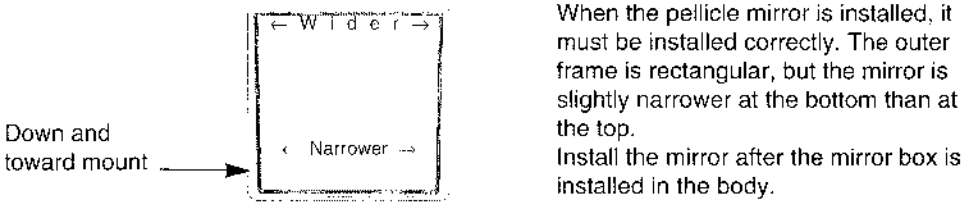

Mirror Box Light Shield
Alignment Edges
Alignment Edges
Apply Bond G103 to the hatched area.
Align the light shield with the edges
shown and apply the light shield.

Fig. 3-33 Light Shield Bonding

7. Pellicle Mirror Positioning



When the pellicle mirror is installed, it must be installed correctly. The outer frame is rectangular, but the mirror is slightly narrower at the bottom than at the top.
Install the mirror after the mirror box is installed in the body.

Fig. 3-34 AF Unit Desoldering -2

2.9 Mirror Box Disassembly-2

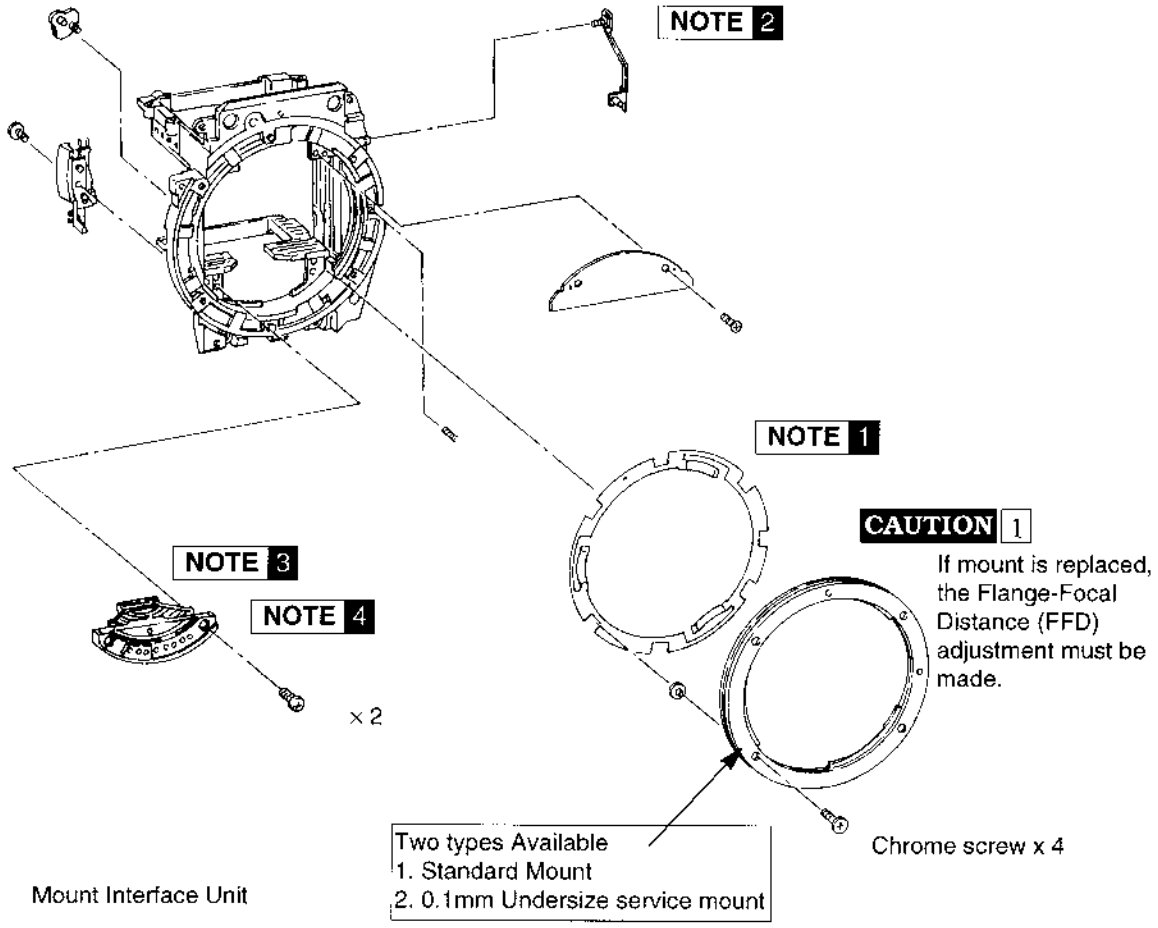


Fig. 3-35 Mirror Box Disassembly - 2

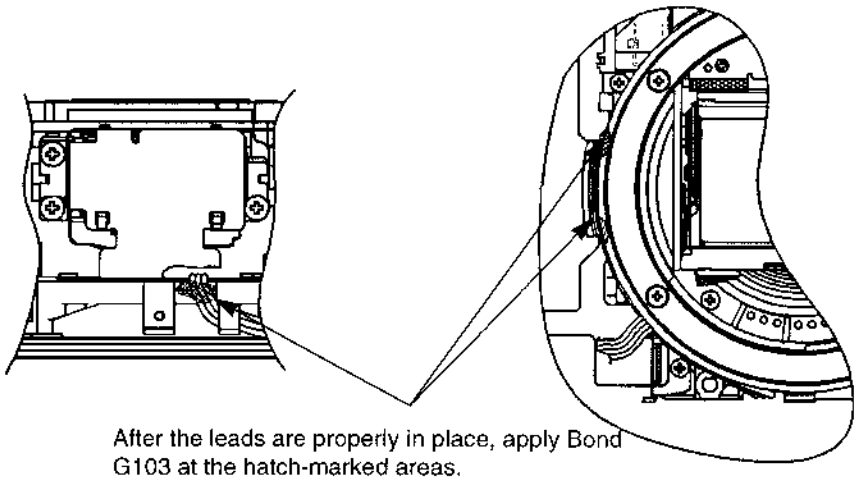


Fig. 3-36 Lead Staking

Removal and Assembly Cautions

There are no unusual procedures for removal or reassembly. Use of lubricants and lead dress are indicated on this page.

1. Lubricants

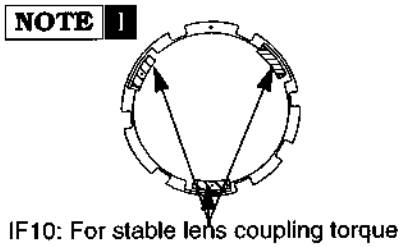


Fig. 3-37 MIF Spring

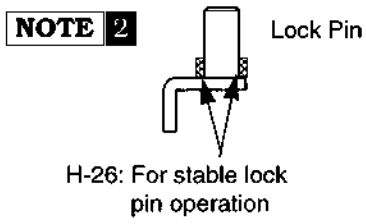


Fig. 3-38 Lock Pin

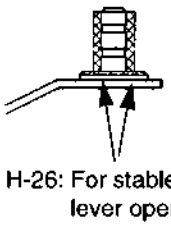


Fig. 3-39 Lock Pin Shaft

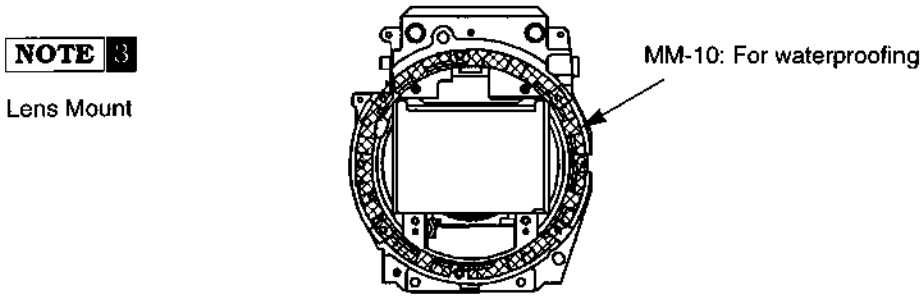


Fig. 3-40 Mount Oil Retardant MM-10

2. Lead Dress

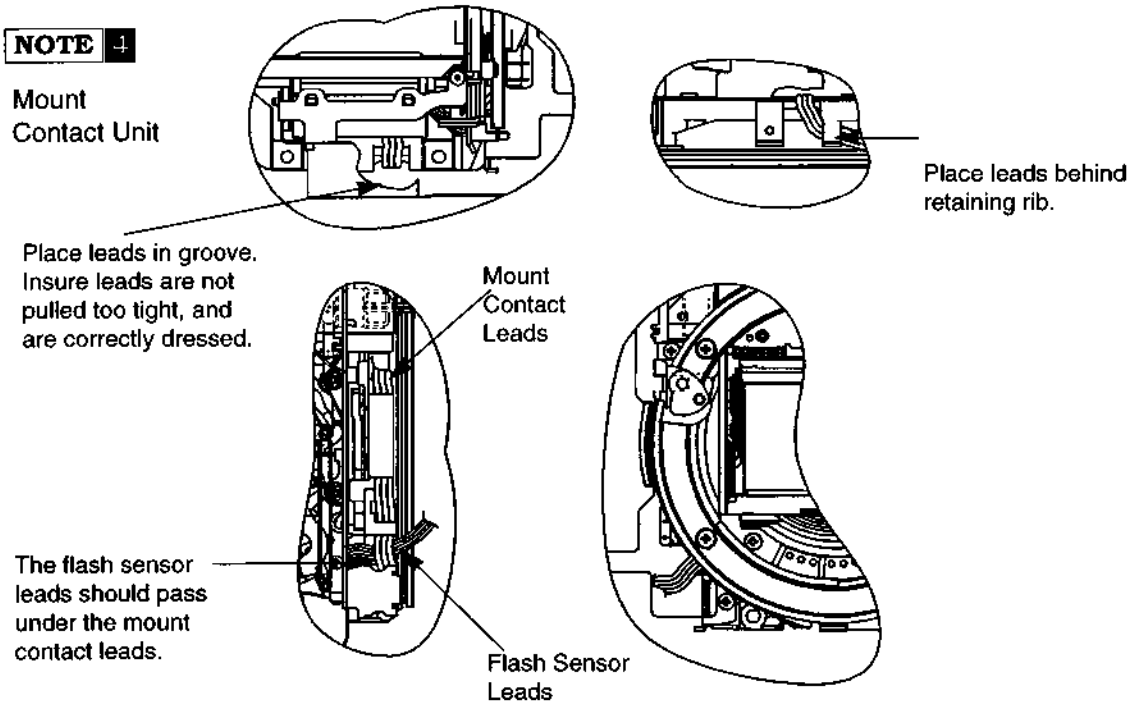

NOTE 4
Mount
Contact Unit
Place leads behind retaining rib.
Place leads in groove. Insure leads are not pulled too tight, and are correctly dressed.
Mount Contact Leads
The flash sensor leads should pass under the mount contact leads.
Flash Sensor Leads

Fig. 3-41 Lead Dress

2.10 Bottom Cover Unit Disassembly

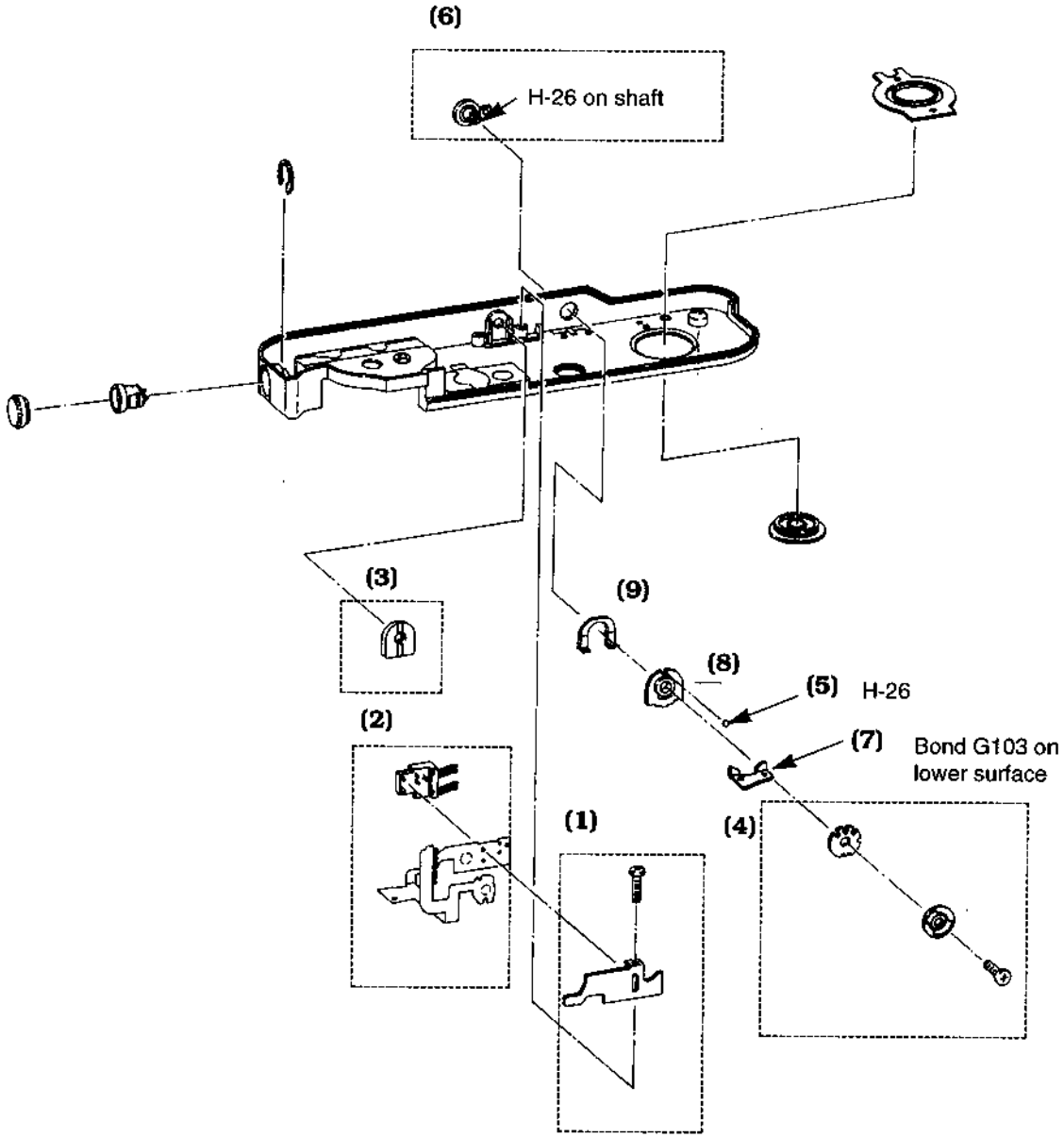


Fig. 3-42 Bottom Cover Unit Disassembly

2.11 Back Cover Disassembly

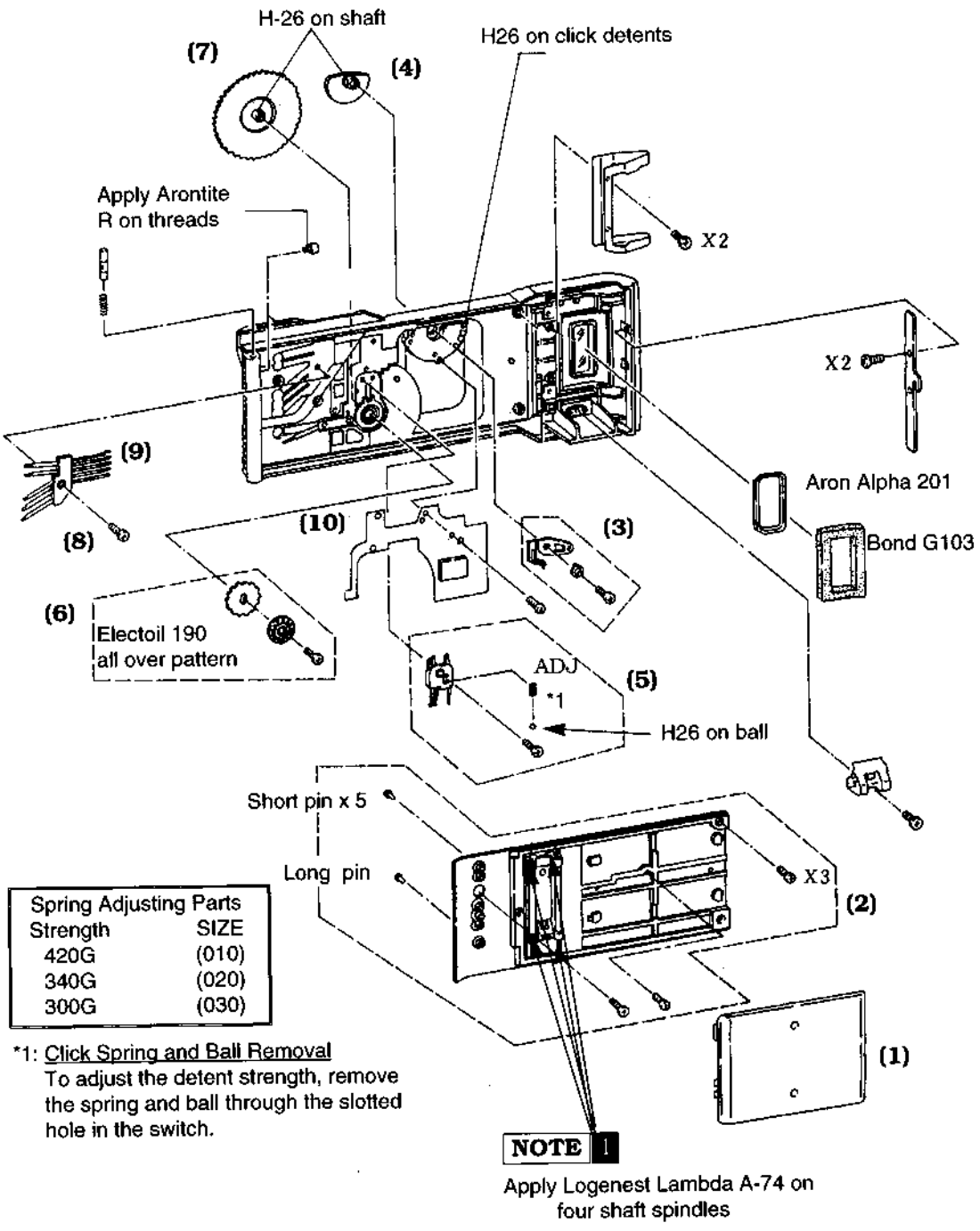


Fig. 3-43 Back Cover Disassembly

2.12 Charge Unit Disassembly

When changing parts, lubricate the numbered points with Logenest Lambda A-74.

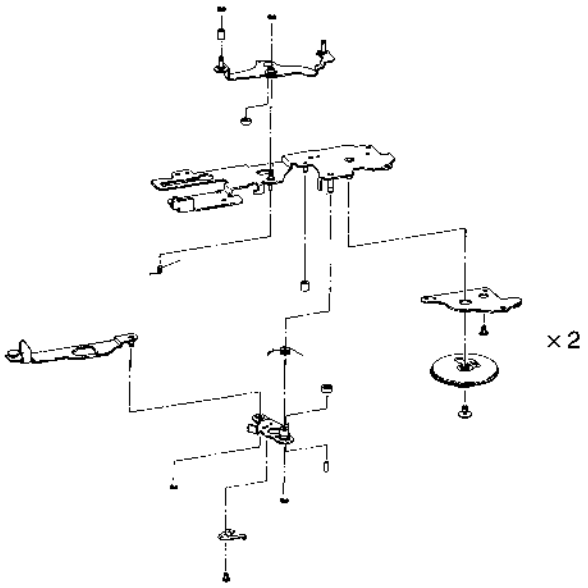
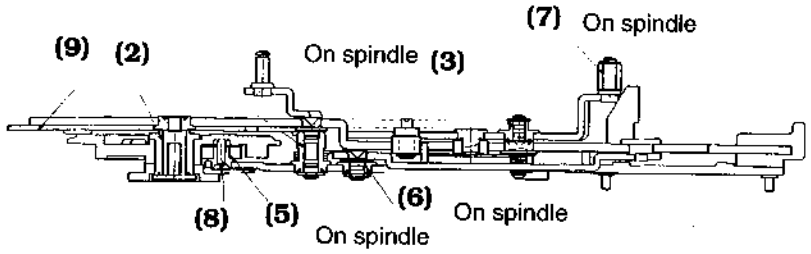


Fig. 3-44 Charge Unit Disassembly



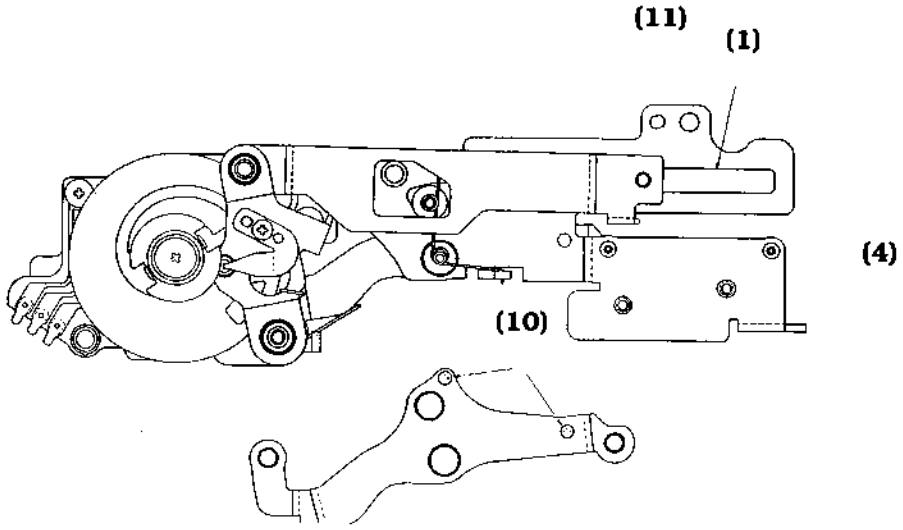
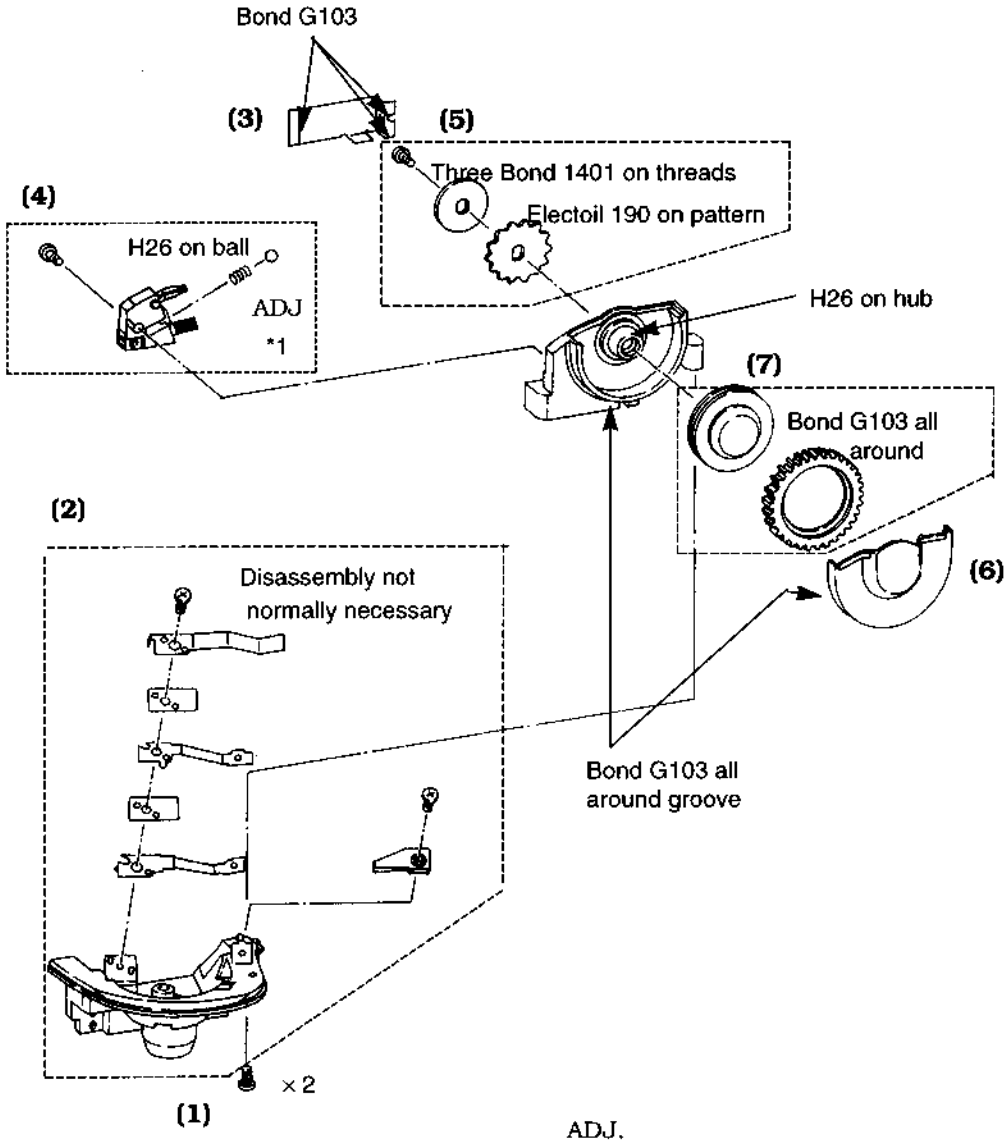


Fig. 3-45 Charge Unit Lubrication

2.13 Electronic Dial Unit Disassembly



ADJ.

Spring Adjusting Parts	
Strength	SIZE
420G	(010)
340G	(020)
300G	(030)

*1: Click Spring and Ball Removal
To adjust the detent strength, remove the spring and ball through the slotted hole in the switch.

Fig .3-46 Electronic Dial Unit Disassembly

2.14 Shutter Unit Disassembly

CAUTION 1 Disassembly and Assembly must be performed in the charged state.

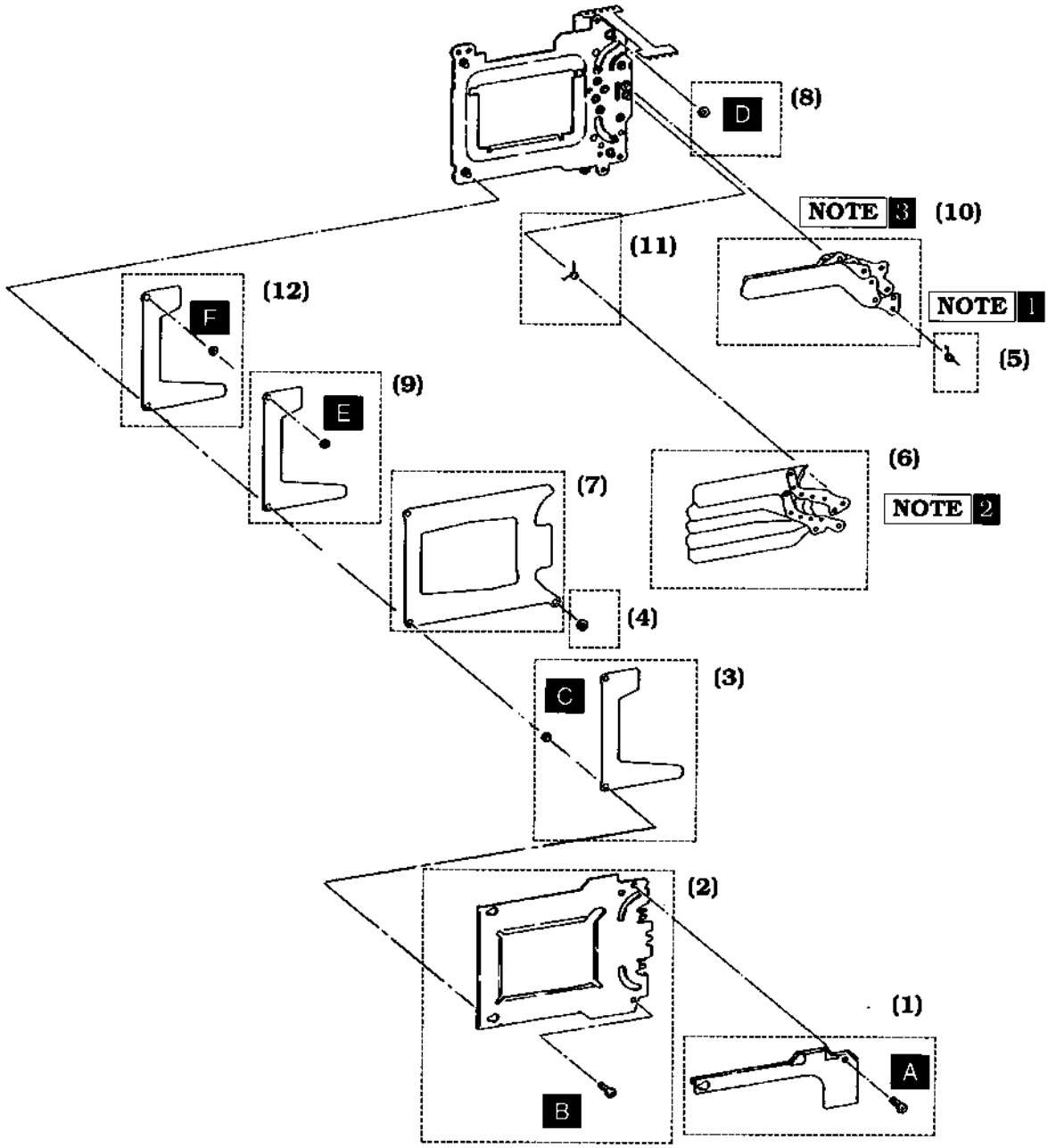


Fig. 3-47 Shutter Unit Disassembly

Removal Procedure

1. Light Shield
   Remove screw (A) and remove the light shield.
2. Front Cover
   Remove screw (B) and remove the front cover plate
3. Follow the number sequence to complete disassembly.

CAUTION 2 Most of the shutter parts are quite thin and they are not stocked as spare parts. Be careful.

Assembly Cautions

NOTE 1 1st Curtain Arm Spring Installation

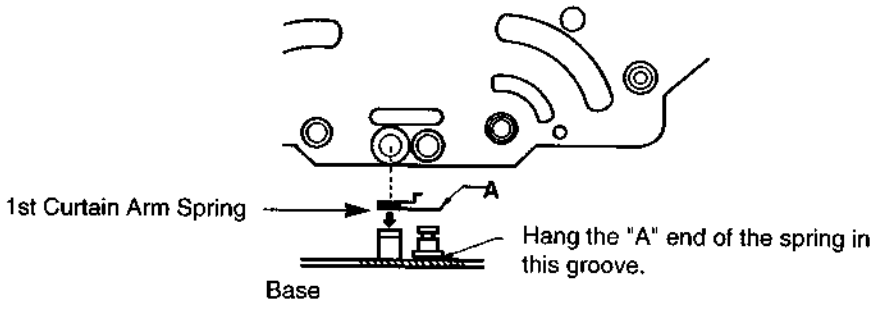


Fig. 3-48 1st Curtain Arm Spring

NOTE 2 1st Curtain Installation

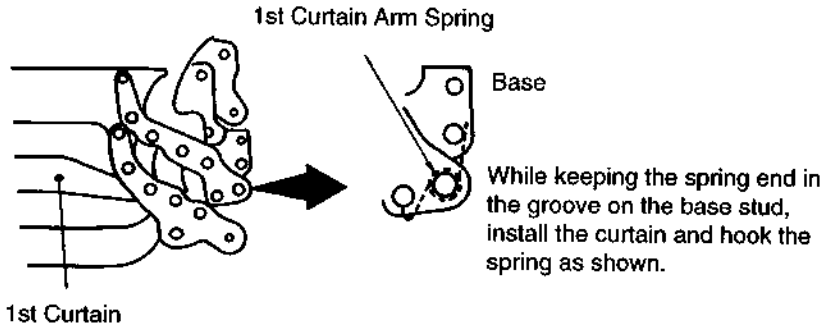

1st Curtain Arm Spring
Base
While keeping the spring end in the groove on the base stud, install the curtain and hook the spring as shown.
1st Curtain

Fig. 3-49 1st Curtain

NOTE 3 2nd Curtain Arm Spring Installation

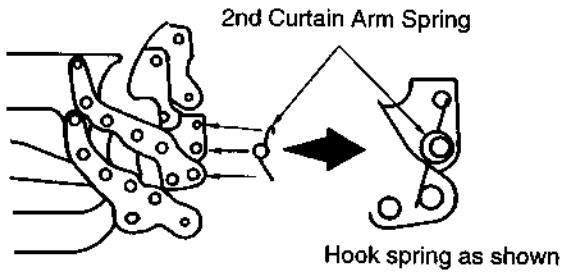


Fig. 3-50 2nd Curtain Arm Spring

3. ADJUSTMENTS

3.1 Release Stroke Adjustment

CAUTION The production release button for the EOS-1N series cameras is a single part combining the button, shaft and adjusting shaft. Replace it with the separate parts when adjustment is necessary. The production release button is equivalent to the standard (005) size adjusting part.

PURPOSE:

The release button's initial position and stroke can be adjusted, within limits, to suit the individual user. *Adjustment is not possible without removing the top cover.*

RELEASE STROKE ADJUSTMENT:

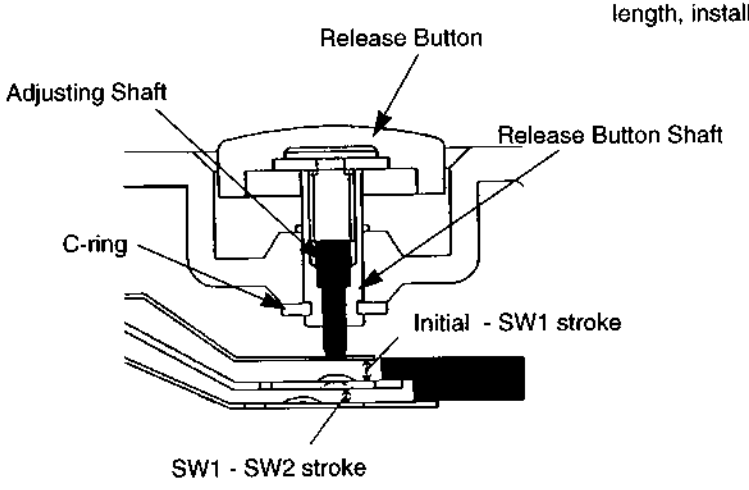
Item	Standard	Adj. Limits
Initial Position	1.0mm/-	0.5to 2.0mm
Initial Position > SW1 On	0.6mm/80g	0.4 to 0.8mm
SW1 > SW2	0.3mm/350g	Not adjustable
SW2 overstroke	0.2mm/-	Not adjustable

ADJUSTMENT:

1. Remove the top cover, and remove the C-ring holding the stock release button
2. Install Release Button (CY1-1709) Release Button Shaft (CY1-1710) and an adjusting shaft (CY1-1338-000-XXX) and reinstall the C ring.
3. To change the initial to SW1 stroke, separate the release button from the release button shaft, remove the adjusting shaft and install one to give the required stroke.
4. Turn the release button clockwise so it is firmly attached to the shaft.
5. Install the assembly in the top cover.

Release Shaft Replacement

To increase the button height, install a shaft with a longer [A] dimension. To increase the SW1 stroke length, install a shaft with a longer [B] dimension.



Adjusting Shaft(CY1-1338)

A	B	SIZE	
1.0mm	2.8mm	(001)	
	3.0mm	(002)	
	3.2mm	(003)	
1.5mm	2.8mm	(004)	
	3.0mm	(005)	Std.
	3.2mm	(006)	
2.0mm	2.8mm	(007)	
	3.0mm	(008)	
	3.2mm	(009)	
2.5mm	2.8mm	(010)	
	3.0mm	(011)	
	3.2mm	(012)	

Fig. 3-52 Release Stroke Adjustment

3.2 Mirror Angle Adjustments

Main Mirror: 45° & Sub Mirror: 41.5°

CAUTION This adjustment is necessary whenever the Shutter Drive Unit, M2 Motor Unit or pellicle mirror frame has been disturbed.

PURPOSE:

To adjust the vertical and horizontal angles of the main (45°) and sub (41.5°) mirrors.

STANDARDS:

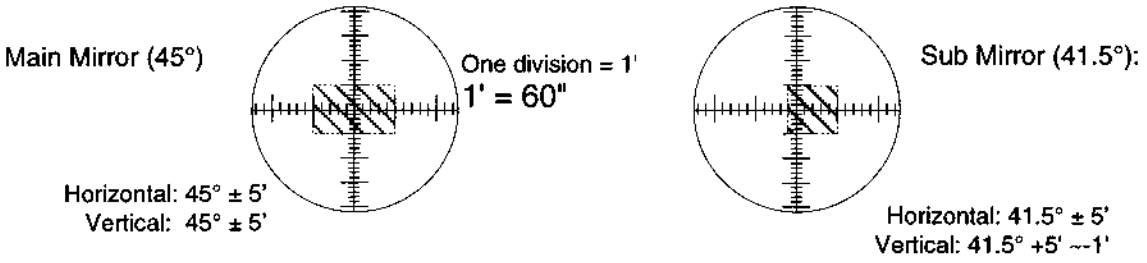


Fig. 3-53 Mirror Adjustment Standards

TOOLS:

Universal Type 90° Collimator -3 Sub-mirror Gage (41.5°) (EOS-5, 10) Main Mirror Gage (all EOS Cameras) 1.3mm Hex Key

PREPARATION:

Set the zero positions with the main and sub mirror standard gages prior to making the adjustments.

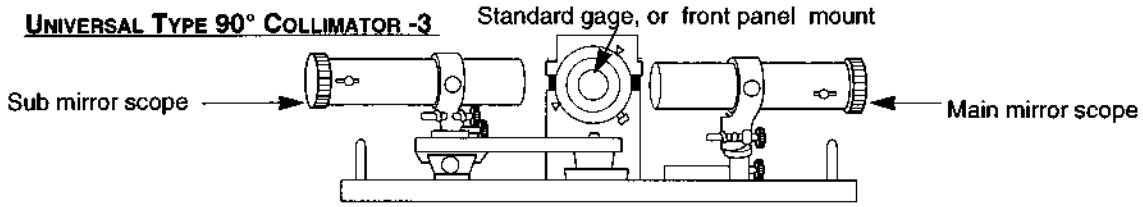


Fig. 3-54 90° Collimator Adjustment

Each reference gage is marked with compensation data, since it is impossible to make gages which are exact. Be sure to include the correction when aligning the gages. (Note: Vertical and horizontal adjustments are reversed in the 1991 tool manual.)

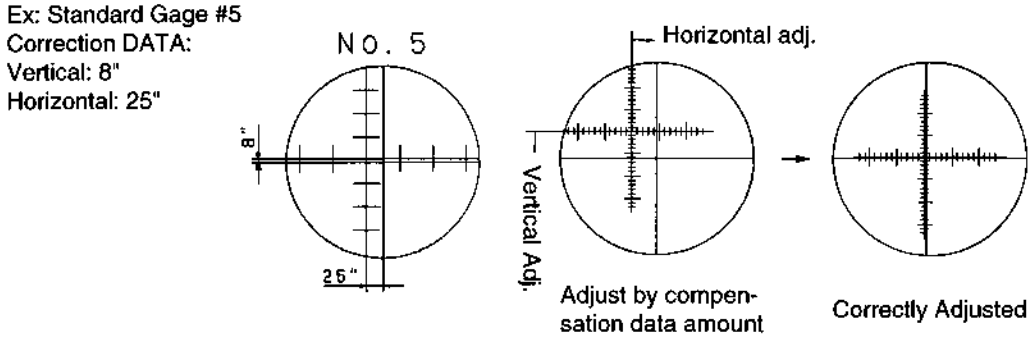


Fig. 3-55 Collimator Chart Adjustment

ADJUSTMENT:

Definitions: MM: Main Mirror; SM: Sub-mirror

ADJUSTING POINTS:

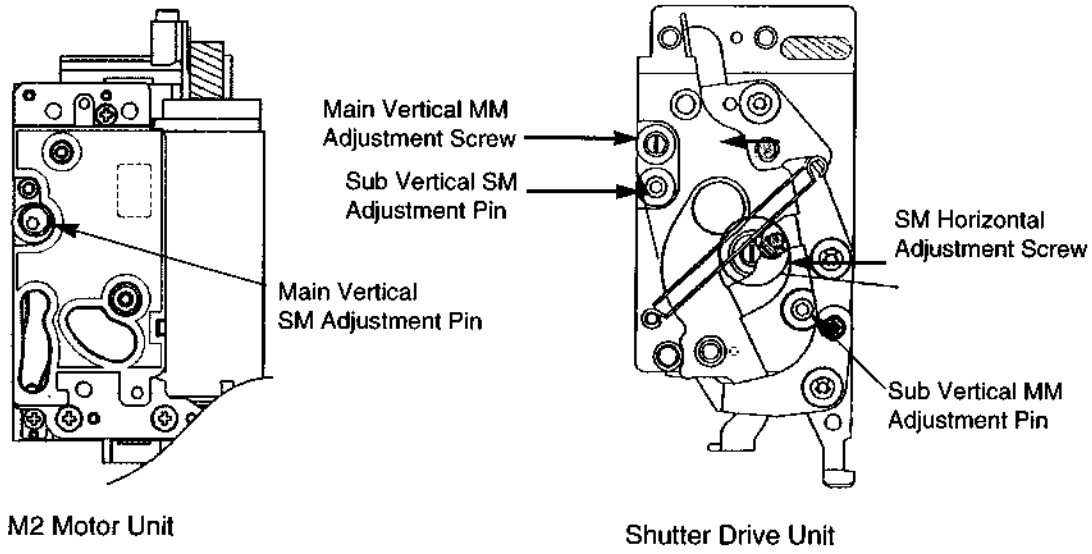


Fig. 3-56 Mirror Angle Adjustments

ADJUSTMENT METHOD:

> **CAUTION** When adjusting the Main Vertical SM Adjustment Pin, do not insert the allen wrench too far because it may hit the phase board located behind the pin.

1. Sub Mirror (41.5°) Vertical and Horizontal Adjustment
   Alternately adjust the vertical and horizontal adjustments with the main and sub adjustments as outlined below.
   1) Adjust the SM horizontal adjustment screw to 41.5° ± 0', then reset to 3' to 5' (Ideal 4') on the collimator scale.
   2) Adjust the main vertical SM adjustment pin to 0', then readjust the SM horizontal adjustment screw to 0'.
2. Main Mirror (45°) Vertical Adjustment
   Adjust the SM horizontal adjustment screw to adjust the main mirror to ± 0', then adjust the Main vertical MM Adjustment Screw to bring the main mirror vertical adjustment into tolerance.
   Normally the Sub vertical MM Adjustment Pin needs no adjustment, except when the main mirror cannot be brought into tolerances without it.

3.3 AF Sensor Vertical Position

CAUTION This adjustment is required if the AF Sensor Unit is disturbed. (The horizontal adjustment is electrical.) Do after mirror angle adjustment.

PURPOSE:

This adjustment aligns the center of the AF sensor with the optical axis.

STANDARD:

The image of the H-BASIS sensor must fall within the AF Frame, and should be as close as possible to being exactly centered.

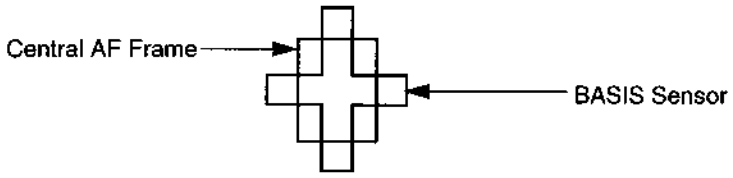


Fig. 3-57 BASIS Standard Position

TOOLS:

EF 50mm f/1.8 lens (production lens); Strong penlight or illuminator

PREPARATION:

To eliminate adjustment errors, place the 50/1.8 on another EOS-1. Set the lens to infinity. Set the camera in manual and set the aperture to f/8 with the electronic input dial. Push the D-o-F button and remove the lens while holding the button in.

ADJUSTMENT:

1. Install the AF sensor unit in the front panel unit with the pentaprism and focusing screen installed. Strong, point light source
2. Install the stopped-down lens, set to infinity (∞).
3. Shine a small, powerful, spot of light into the bottom of the AF sensor unit. Looking into the lens the outline of the sensor should be superimposed on the focus mark as shown. Adjust the sensor so it is centered in the AF Frame.
4. After adjustment, tighten the screws just enough to hold the position and stake with Three Bond 1401C. (Tightening too much may break the sensor base.)

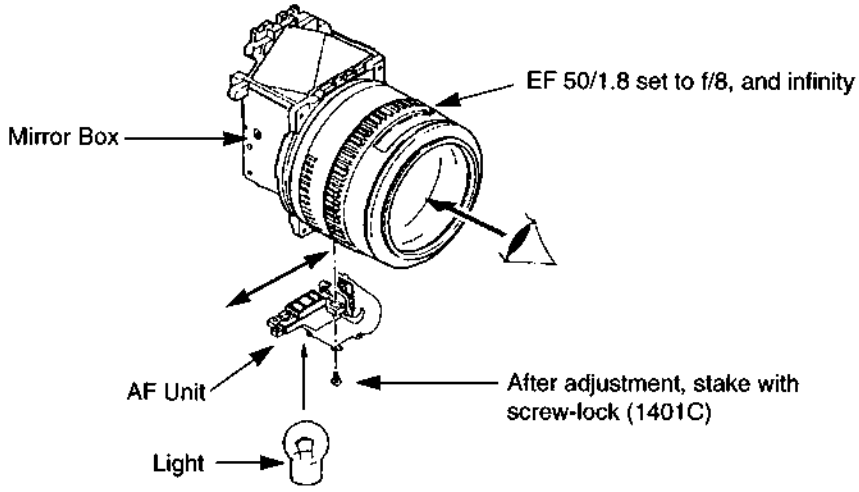


Fig. 3-58 BASIS Positioning

3.4 VIEWFINDER PARALLAX ADJUSTMENT

CAUTION Do after Mirror Angle Adjustment.

PURPOSE:

To insure 100% viewfinder coverage, adjust the center of the viewfinder image to correspond with the center of the film aperture.

STANDARD:

Center deviation: 0±0.1mm

The viewfinder image must be completely within the film aperture, and should be centered.

TOOLS:

Ground glass Parallax Chart (Local Fabrication) EF 50mm *f*/1.8 Tool lens

PREPARATION:

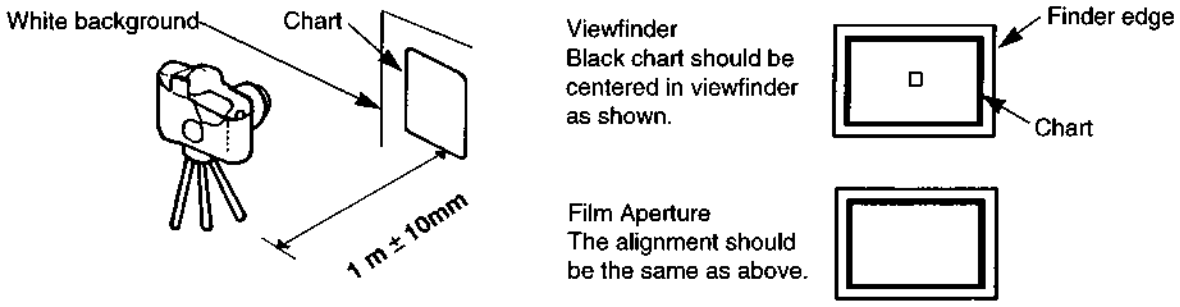


Fig. 3-59 Finder Parallax Set-up

ADJUSTMENT:

1. Remove the focusing shims from the front panel being replaced and tack them in place in the new front panel
2. Install the pentaprism unit and push it forward and to the right. Tighten the screws.
3. Install the front panel in the camera body. Attach the lens and align so the black chart falls just within the viewfinder. and align check finder parallax as shown above. Open the shutter at "bulb" and check that the entire black chart is within the film aperture. Install different shims if necessary.
4. Bond the washers in place with G103.

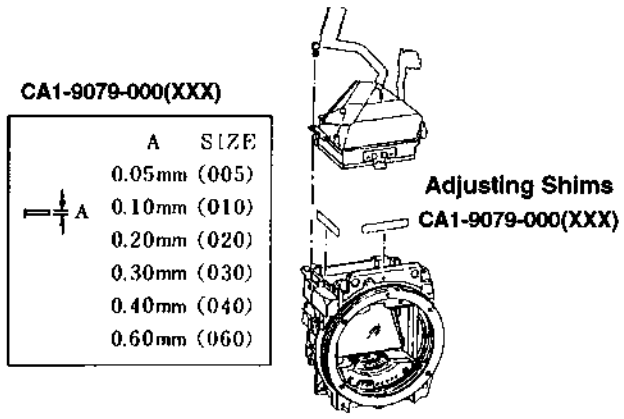


Fig. 3-60 Finder Parallax Shims

3.5 SHUTTER CURTAIN TRAVEL TIME ADJUSTMENT

CAUTION If the 2nd Curtain Travel Time standard cannot be met, change the unit. There is no 1st curtain adjustment. If the standard is not met, change the unit.

PURPOSE:

This adjustment fine tunes the 2nd curtain travel time to insure proper operation of the 1/8000s shutter speed.

STANDARD:

Item	Curtain Travel Time	Remarks
1st Curtain	2.2 ± 0.2ms	Replace if limits cannot be met.
2nd Curtain	2.2 ± 0.2ms	Adjustable
1st /2nd Difference	0 ± 0.02ms	

<!!> Due to the very fine tolerances necessary to insure 1/8000s shutter accuracy, test equipment accuracy is very important. Take an average of several units from stock to establish your shop standard.

TOOLS:

FS-5300 Shutter Tester or EF-500 AE Tester, Power Supply, 2nd Curtain Spanner (CY9-6147-000).

(Note: EF-8000 is not suitable because it cannot measure curtain travel time unless a lens is installed).

PREPARATION:

1. Charge the shutter.
2. Install the shutter under test in a dummy body and attach a 3 volt power supply as shown.
3. Place the test body on the tester.

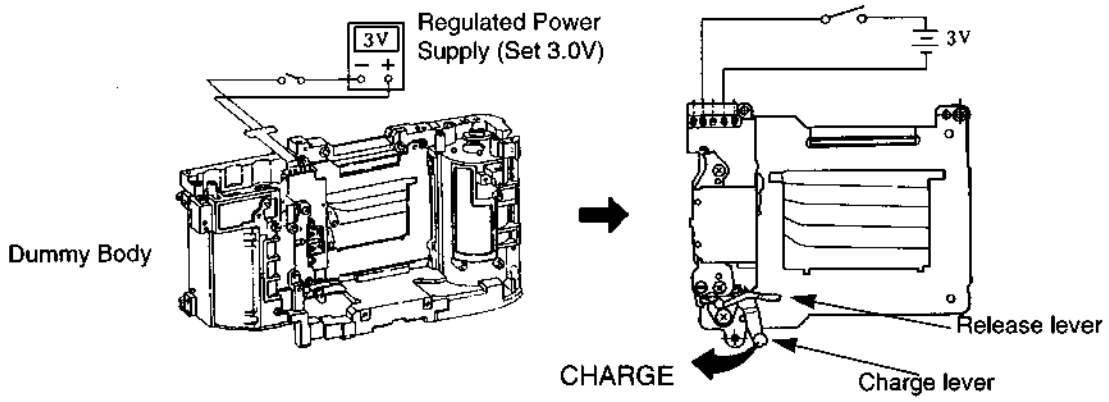


Fig. 3-61 Shutter Preparation

ADJUSTMENT:

1. Release the 1st curtain with the release lever, and check the travel time. (Change the unit if not within tolerance.)

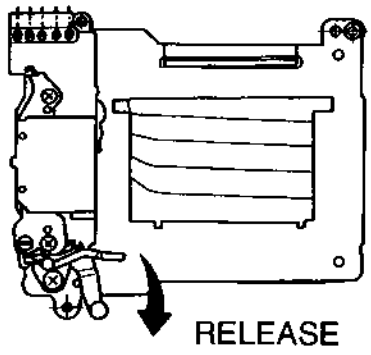


Fig. 3-62 Shutter Release

2. Turn the power off to let the 2nd curtain run. Check the travel time.Repeat (1) and (2) as necessary.
3. Remove the shutter from the body. If necessary, adjust the 2nd curtain gear a small amount with the special spanner, reinstall and recheck the curtain travel time. Repeat as necessary.

<!!> The gear shaft is eccentric so direction of rotation is not directly related to time change.

<!!> If the curtain travel time cannot be brought within tolerances, change the shutter unit.

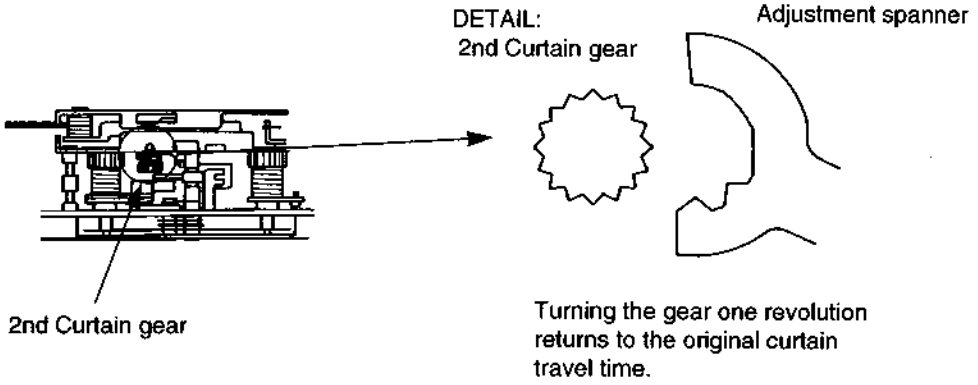

DETAIL:
2nd Curtain gear
Adjustment spanner
2nd Curtain gear
Turning the gear one revolution returns to the original curtain travel time.

Fig. 3-63 Shutter Spanner

3.6 FLANGE to FOCAL PLANE DISTANCE ADJUSTMENT

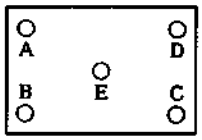
CAUTION Necessary if mount is changed, - use as few shims as possible.
The main **pellicle mirror must be removed** to do this procedure.

PURPOSE:

To adjust the flange to pressure plate distance to the standard, 44.14mm.

STANDARD:

44.**15** + 0.02mm to Outer Rails (with optical flat)
44.**18** + 0.02mm to center of pressure plate
0.030 ± 0.015mm Pressure Plate center depression
(Record reading for electronic AF adj.)



Aperture (& Pressure Plate)
Measurement Points

When measured off of the pressure plate with the back cover closed, E should be 0 to 5µm greater than A,B, C, or D. (It is permissible for one corner to be up to 5µm greater than E.)

Fig. 3-64 Pressure Plate Measurements

TOOLS:

Dial Gage w/ 2mm adaptor ring Optical flat (for Block gage)
Block gage (44.14mm or 42.14mm) Optical flat (for camera aperture)
Note: A new 0.001mm Dial Gage is now available (CY9-7094-000) for very accurate FFD.

PREPARATION:

Install the 2mm adaptor ring between the gage body and tip to compensate for the EOS system's longer FFD.

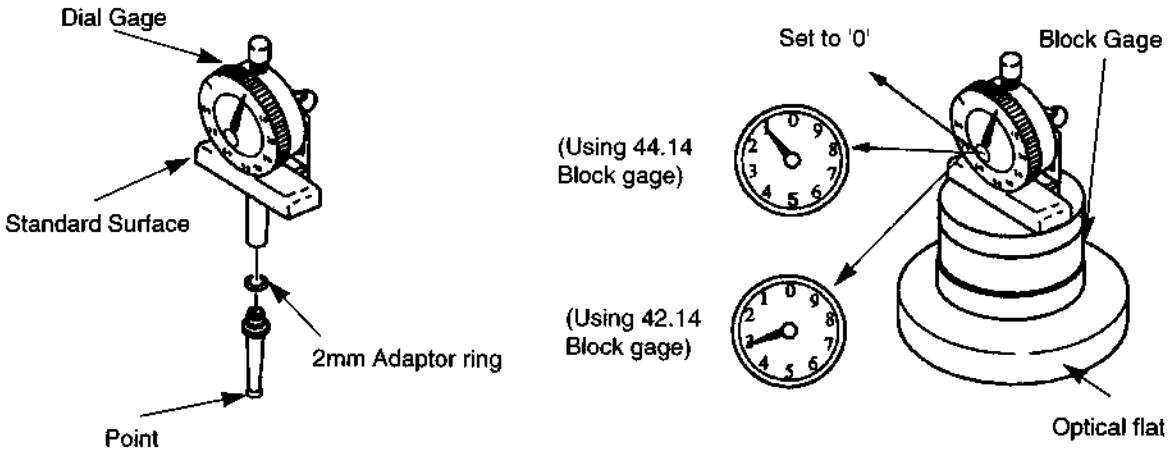


Fig. 3-65 Dial Gages

ADJUSTMENT:

1. Flange to Focal Plane Distance (FFD)
   1) Remove the pellicle mirror, open (or remove) back cover, set the camera outer rails down on the aperture optical flat, and open the shutter at "B".
   2) Place the dial gage on the mount and measure the FFD at the center and all four corners.
   3) If not within limits, adjust with the undercut service mount(CY1-1366) and as few focusing shims as possible.
2. Pressure Plate Center
   1) Remove the optical flat, close the back cover and open the shutter at "B".
   2) Place the dial gage on the mount and measure the FFD at the center and all four corners of the pressure plate.
   3) If center FFD is not within limits, change the pressure plate.
3. Pressure Plate Center Depression.
   1) Calculate center depression (Step 2 - Step 1)from above and if not within limits, change the pressure plate.
   2) Check also the difference in the four corner readings from the pressure plate and the center reading from the pressure plate. The center should be concave with respect to the corners, i.e. the reading should be up to 5μm greater at the center than at the corners.

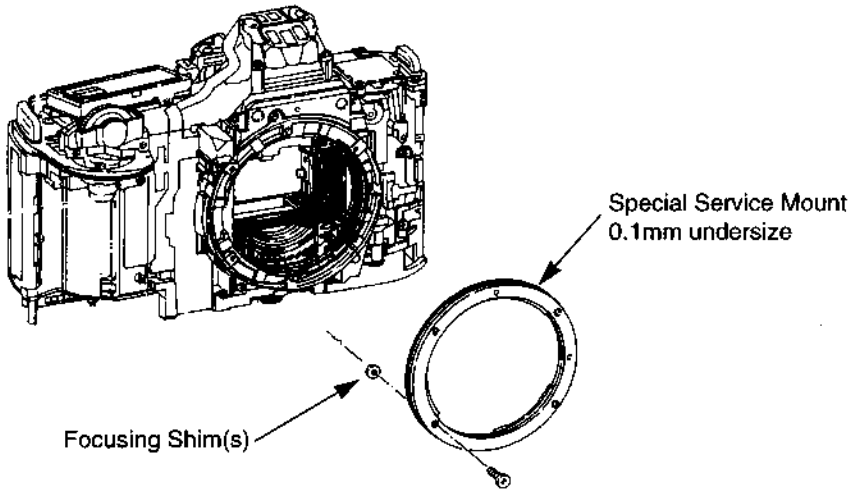


Fig. 3-66 FFD Mount & Shims

3.7 FLANGE to FOCUSING SCREEN ADJUSTMENT

CAUTION Necessary if viewfinder unit is replaced, or FFD is Adjusted.

To insure that the flange to focusing screen distance corresponds to the flange to film plane distance.

STANDARD:

44.00 + 0.02mm

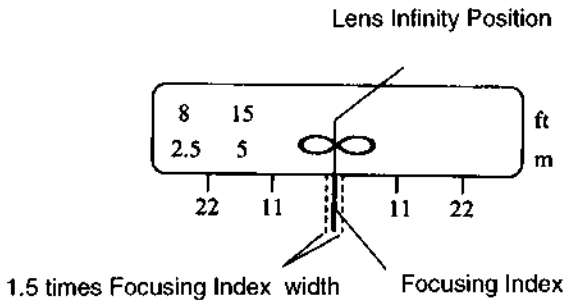


Fig 3-67 1.5 Line Width

TOOLS:

Universal 500mm Collimator

EF50mm f/1.8 lens Magnifier AD-S

Focusing Screen B (Split-image)

ADJUSTMENT:

1. Install the 'B' focusing screen, and set the lens on manual and at infinity. Use the magnifier on the viewfinder to view the collimator infinity target.
2. Adjust with washers so the center of the infinity mark is centered on the index (± 1.5 lines).
3. If a collimator is not available and there is good visibility, use a straight-edged target at least 250 meters away.

CA1-5077-000
CA1-9078-000 detail

	A	SIZE
⟷ A	0.03mm	(003)
	0.05mm	(005)
	0.10mm	(010)
	0.20mm	(020)
	0.30mm	(030)
	0.40mm	(040)
	0.60mm	(060)

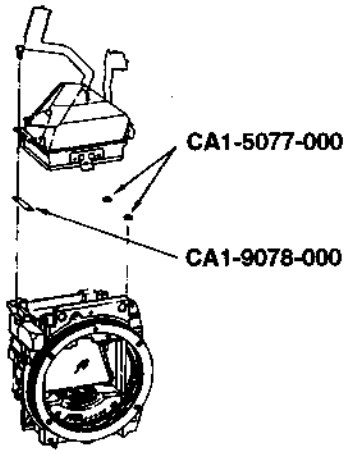


Fig 3-68 Focusing Shims

3.8 Focusing Screen Positioning Adjustment

PURPOSE:

To align the position of the focusing screen with the position of the Superimpose Marks screen.

STANDARD:

Lateral and Longitudinal Limits: 0.13mm

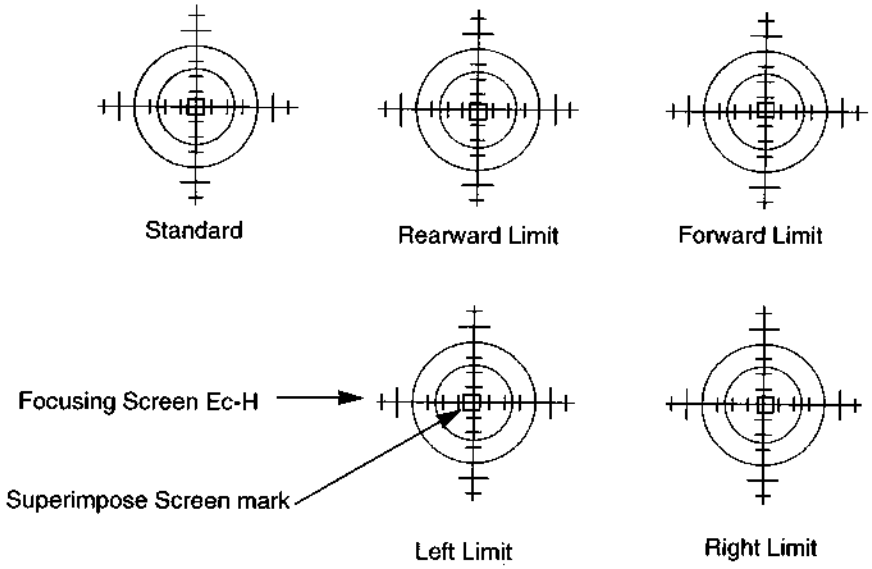


Fig. 3-69 Superimposed Mark Standard

TOOLS:

Ec-H Focusing Screen

ADJUSTMENT:

Remove the pentaprism unit and turn the adjusting screw to move the screen to meet the lateral standard illustrated above.

Note: There is no longitudinal adjustment. If not within tolerances, replace the pentaprism unit.

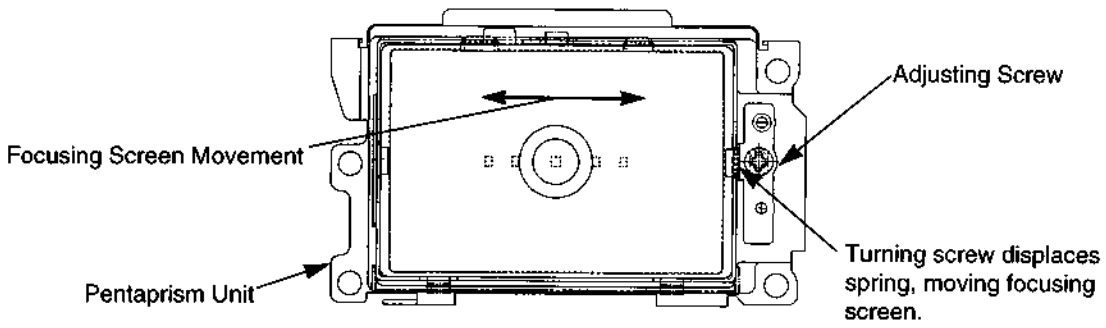


Fig .3-70 Superimpose Position Adjustment.

4. ELECTRICAL ADJUSTMENTS

4.1 INTRODUCTION

Shutter adjustment:	Adjusting shutter speeds.
SPD positioning:	Positioning IC1 (AE IC).
AE accuracy adjustment:	Adjusting data output of IC1 (AE IC).
AF basic adjustment:	Adjusting data output of BASIS.
AF focus adjustment:	Adjusting focus data from data output of BASIS.
Flash adjustment:	Adjusting the data output of the flash sensor.
Inhibit voltage adjustment:	Adjusting inhibit voltage for the camera.
Temperature correction:	Correcting data output of the temperature sensor.
AE shift:	Shifting automatic exposure level at user request.
Sensor data output:	Displays data output from BASIS to check AF accuracy.
Focus data output:	Displays focus data to check AF accuracy.
AF focus shift:	Correcting rare slight AF focus errors resulting from use of a lens with shallow depth of focus (EF50 mm *f*/1.0L or EF 85 mm *f*/1.2 L).
Self check:	Checking the switches and LCDs.
Data transfer:	Initializing, storing, or transferring camera data, and resetting counter when necessary..

4.2 ADJUSTMENTS after PARTS REPLACEMENT

Table 3-1 ADJUSTMENTS after PARTS REPLACEMENT-

Adjustment / Replaced Parts	Initia-lization	Temperature correction	Inhibit voltage	Shutter	AE			AF			Flash OTF	SI Align
					SPD	Accuracy	Shift	Accuracy	Focus	Focus shift		
AE					①	②	▲					
Main flex (Data not readable)	①	②	③	④	⑤	⑥	▲	⑦	⑧		⑨	⑩
Main flex (Data readable)		①	②		③	④					⑤	
AF unit								①	②			
Shutter unit				①								
Mirror unit								①	②			

NOTES:
- The numbers indicate the order of adjustment.
- The items marked ▲ in the above table are optional.
- Inhibit voltage and temperature compensation adjustments must be performed immediately after initialization.

4.3 Adjustment Software for this Camera

1. Adjustment Software Loading

The file name of this software is EOS1NRS.EXE. After a work disk is made the software will run automatically by the AUTOEXE.EXE file

2. Adjustment Software Operation

This software only requires operation of the RETURN (ENTER) key, SPACE Bar and Cursor keys. Follow the instructions on the screen to adjust the camera.

3. CONNECTING THE CAMERA TO THE COMPUTER

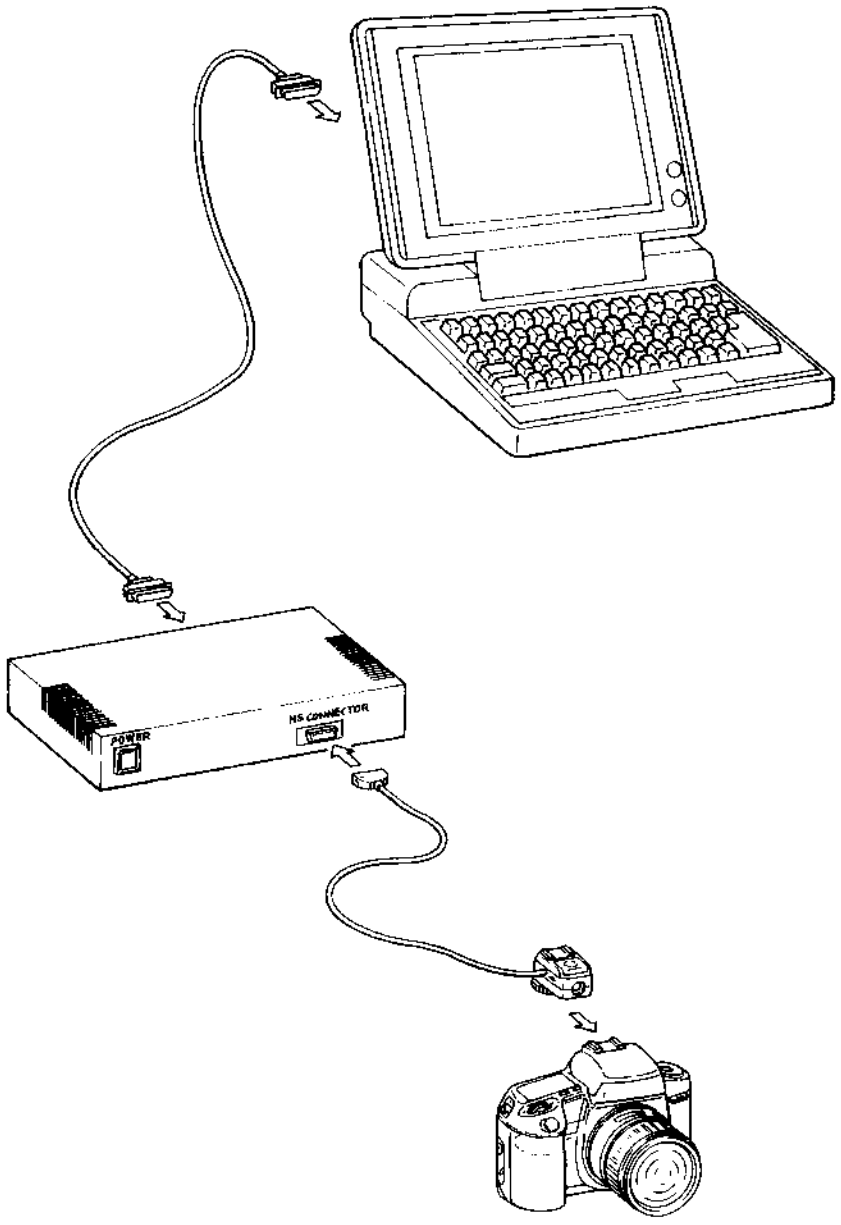
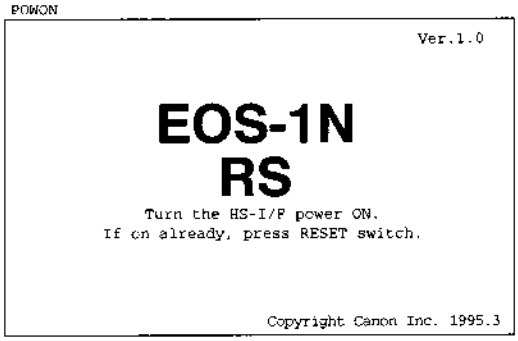


Fig. 3-85 Camera Connection

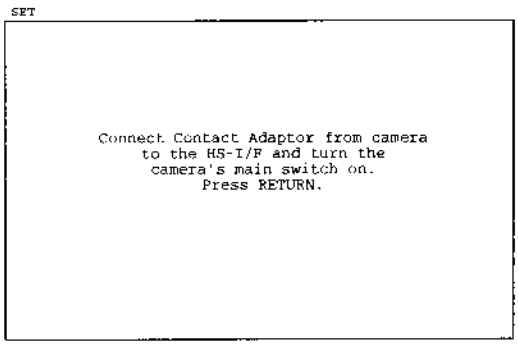
4. ADJUSTMENT START-UP PROCEDURES

Load the work disk in the computer then turn it on. After a while, the title screen appears as shown at the right.

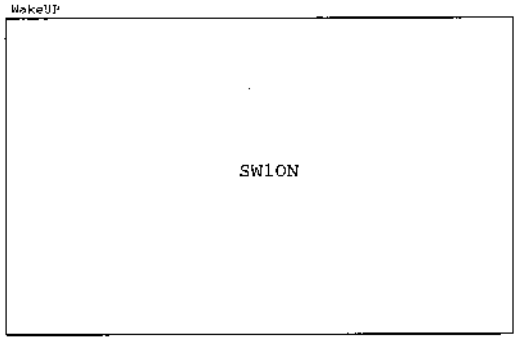


Turn on the HS-I/F in accordance with the directions displayed on the screen. If HS-I/F has already been turned on, turn it off once and then turn it on.

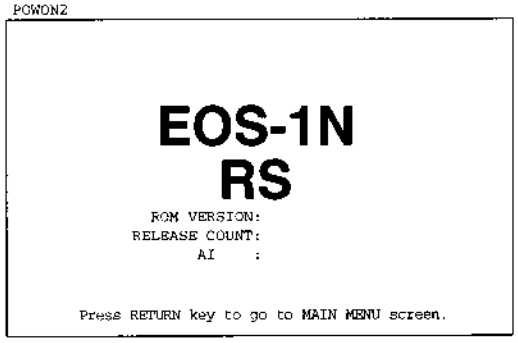
Upon establishment of communications between the computer and HS-I/F, the screen shown at the right appears. Connect the camera to HS-I/F as indicated and turn on the main switch on the camera. After communications are established, press the Return key.



At times it is necessary to switch the cam era's SW1 on to establish communications. Follow the screen instructions. If more than a minute passes before SW1 is pressed, an error will occur.

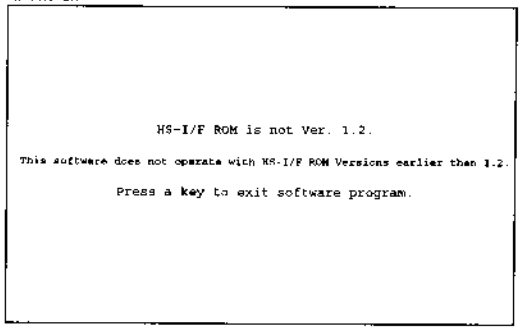


Upon establishment of communications between the computer and the camera, The camera ROM version number and number of releases.



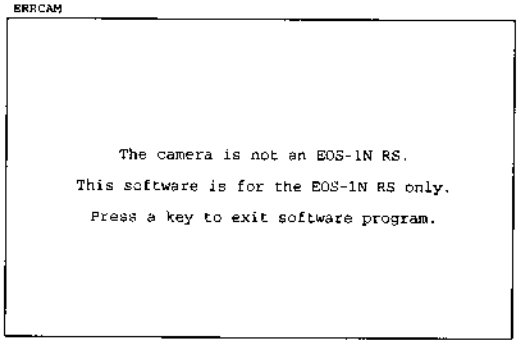
The EOS-1N RS requires an HS-I/F with uprated Ver. 1.2 ROM for adjustments. If the HS-I/F does not have Ver. 1.2 ROM, this message will appear.

ERRHSVER


HS-I/F ROM is not Ver. 1.2.
This software does not operate with HS-I/F ROM Versions earlier than 1.2.
Press a key to exit software program.

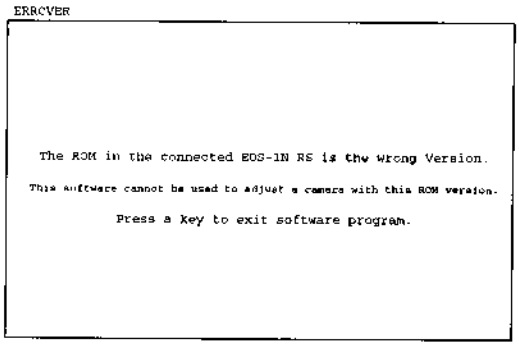
If a camera other than an EOS-1N RS is attached, this message will appear.

ERRCAM



Press the Return key to display the main menu screen.

ERRCVER


The ROM in the connected EOS-1N RS is the wrong Version.
This software cannot be used to adjust a camera with this ROM version.
Press a key to exit software program.

5. Adjustment Items Table

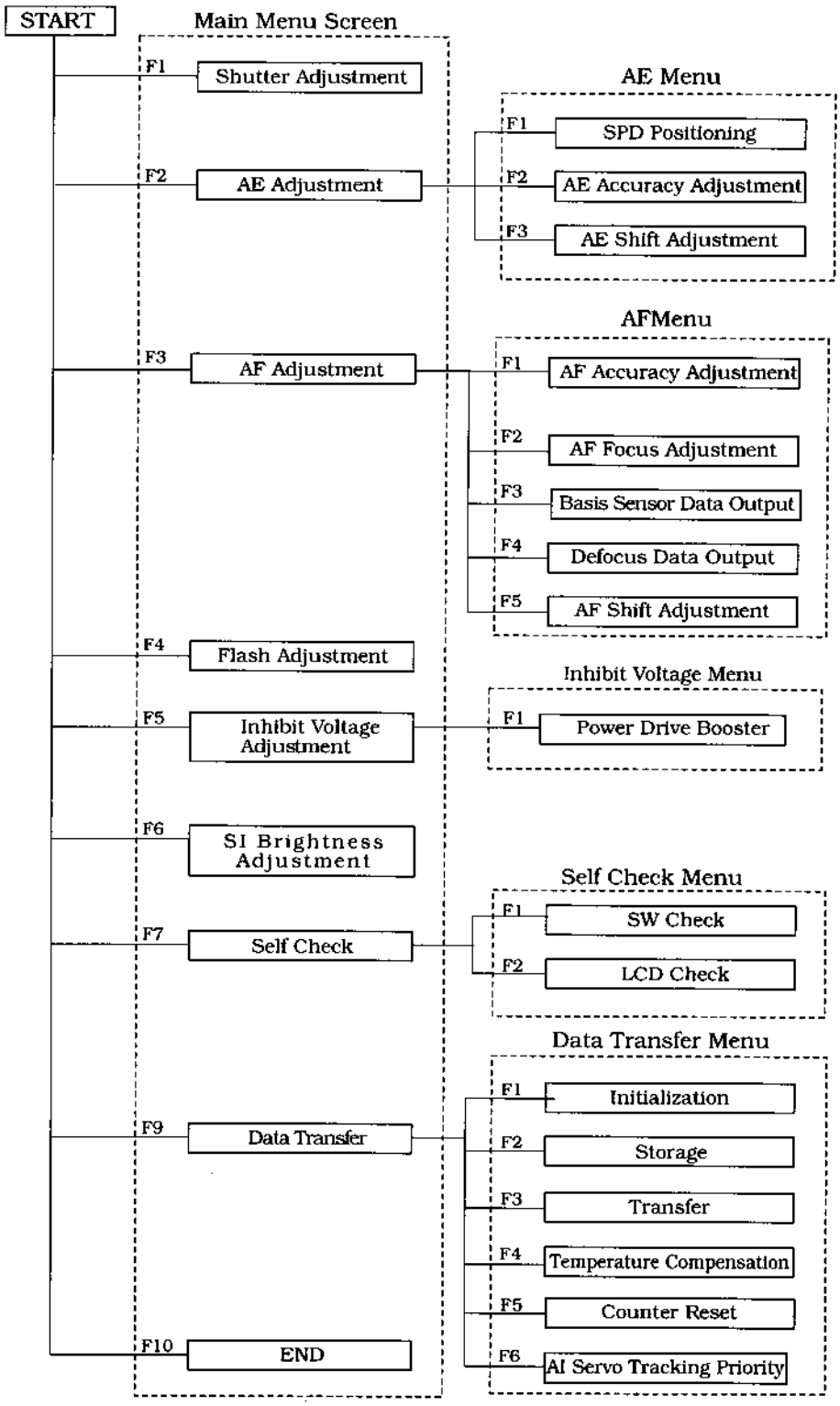


Fig. 3-86 Adjustment Items

4.4 SHUTTER ADJUSTMENT

PURPOSE:

To adjust shutter speeds. If the maximum shutter speed (1/8000sec) is within the limits all shutter speeds have been adjusted.

STANDARD:

Shutter speed standard

Marked shutter speed:	1/8000
Exposure time:	0.122ms
Limits:	0.086 - 0.173ms

CAUTION Check that the shutter curtain travel times conforms to the standard. If not,adjust the 2nd curtain travel time.If the 1st curtain is not within limits, replace the shutter unit.

Shutter curtain travel time standard

First curtain travel time:	2.2 ± 0.2ms
Second curtain travel time:	2.2 ± 0.2ms

TOOLS:

Personal computer	RS-232C cable	HS-I/F
Regulated DC powers supply		Tool battery
Adjustment software (stored on a work disk)		
EF-8000	EF50mm *f*/1.8 production lens	

PREPARATION:

1) Start adjustment program, connect the camera to the computer through the HS-I/F , and select (F1) Shutter Adjustment on the menu screen.
2) Attach the EF50mm *f*/1.8 production lens to the camera, set TV and AV to 8000 and *f*/1.8 respectively in the manual mode, and set the camera on the EF-8000. Set the EF-8000 to shutter speed mode.

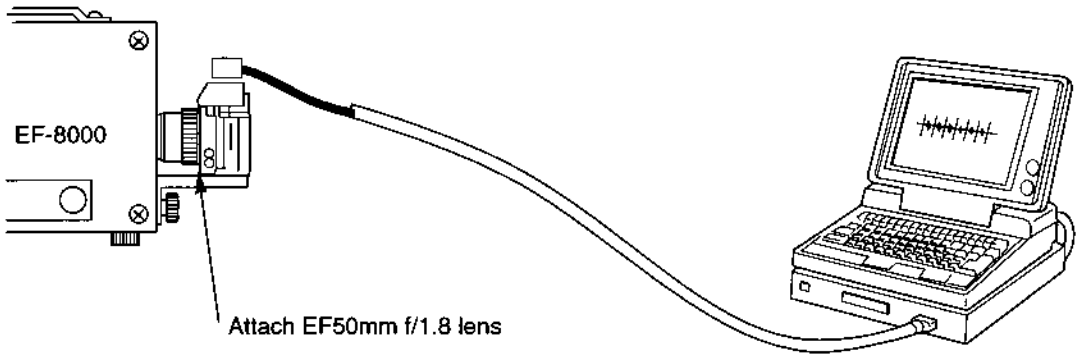
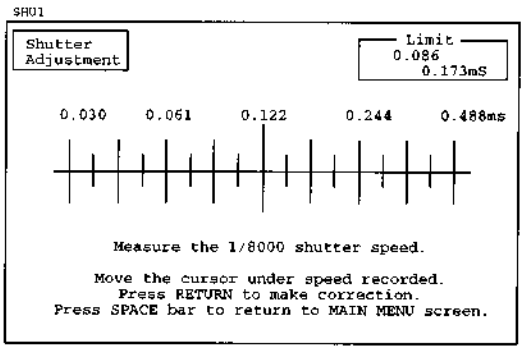


Fig. 3-87 Shutter Speed Adjustment

ADJUSTMENT:

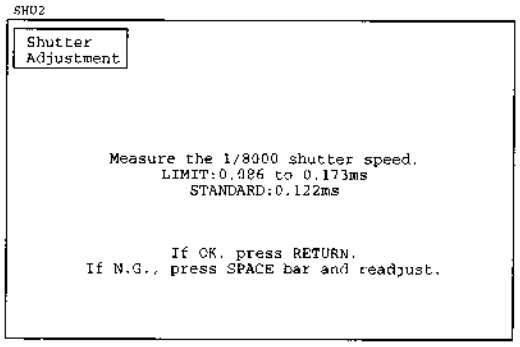
1) Measure the shutter speed and press the cursor keys to move the cursor to enter the measured value.

   Press the Return key and then SW1 on the camera to establish communications between the two to change camera data.



2) After completion of the communications, measure the shutter speed again to check whether it conforms to the standard.

   If not, press the Space bar and return to step 1).



4.5 X Time Lag Check

TOOL:

EF-8000

STANDARD:

Shutter speed:	1/250
Line A:	0.18ms or more
Line B:	1.50ms or more

ADJUSTMENT:

1) Set a shutter flash speed of 1/250 in the TV mode or manual mode.
2) Mount a compatible flash or a hot shoe unit (CG9-3194-000) with a 4.7K ohm resistor from the CCC terminal to ground.
3) Test with EF-8000 in DELAY mode, and checks lines A and B.

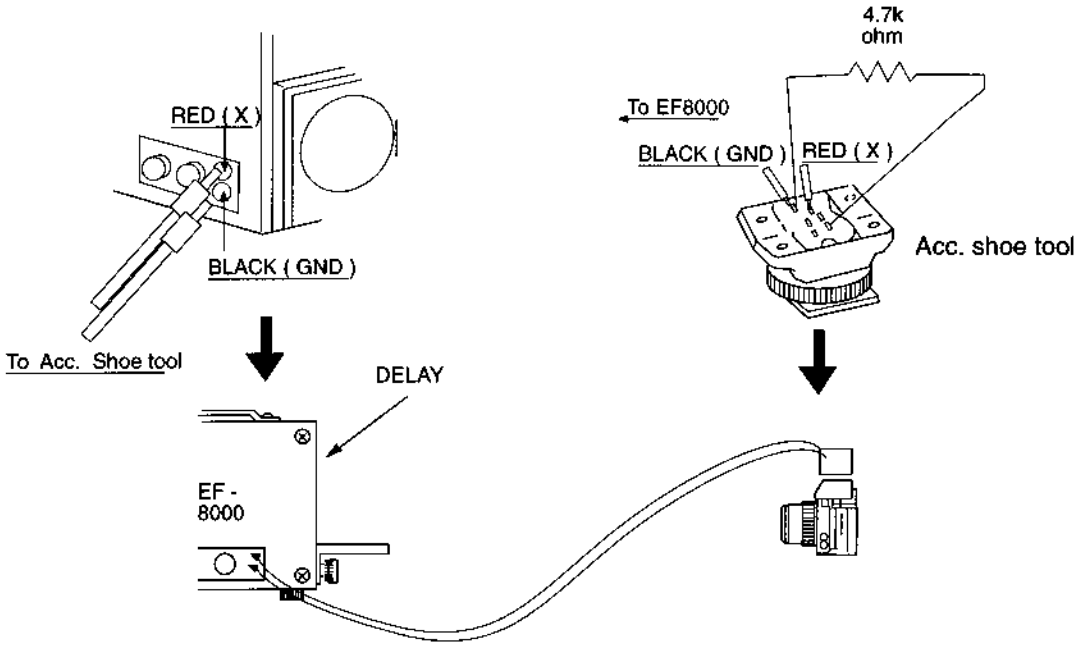


Fig. 3-88 X Time Lag Check

<MEMO>

4.6 SPD Positioning

PURPOSE:

To align the center of SPD with the optical axis of the camera.

CAUTION	Prior to doing this adjustment, do the AE Accuracy Adjustment (F2 on the AE Menu). After finishing this adjustment. Repeat the AE Accuracy Adjustment

TOOLS:

Personal computer	RS-232C cable	HS-I/F
Regulated DC power supply	Tool battery	
Adjustment software (stored on a work disk)		
EF-8000	EF50 mm $f/1.8$ production lens	
Tripod	SPD positioning mask (CY9-1102-000)	
Focusing Screen Ec-H		

PREPARATION:

1) Start adjustment program, connect the camera to the computer through the HS-I/F , and select (F2) AE Adjustment menu screen.
2) Attach the EF50 mm $f/1.8$ production lens to the camera and fix the camera on the tripod toward the light source.
3) Attach the SPD positioning mask to the light source of EF-8000 and set the brightness to LV 15.
4) Set the camera 45 cm away from the SPD positioning mask and align the center of the SPD positioning mask with that of the center SI focus frame in the finder. Set the lens manually at the closest distance (45 cm).

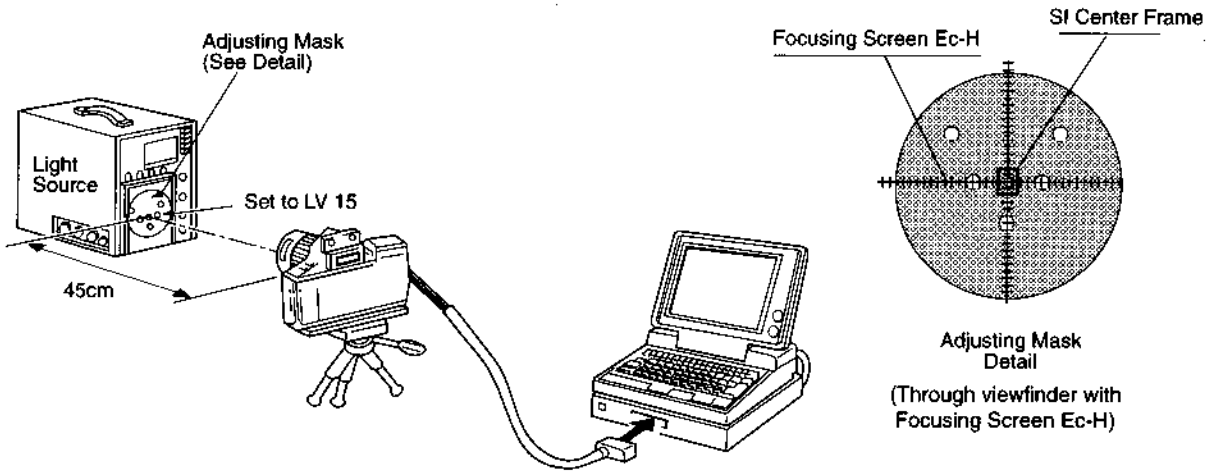


Fig. 3-89 SPC Positioning

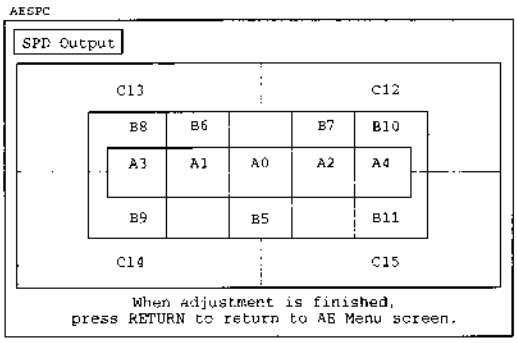
ADJUSTMENT:

1) Select F1 SPD Positioning on the AE menu screen. The EV values of individual photometric sensors of the SPD will be displayed.

2) Move the mask and confirm that the values change.

3) Position the SPD so that the EV values on A1 and A2 and B6 and B7, fall within ± 1 EV.

5) After positioning the SPD, fix the SPD holder with instant adhesive agent.



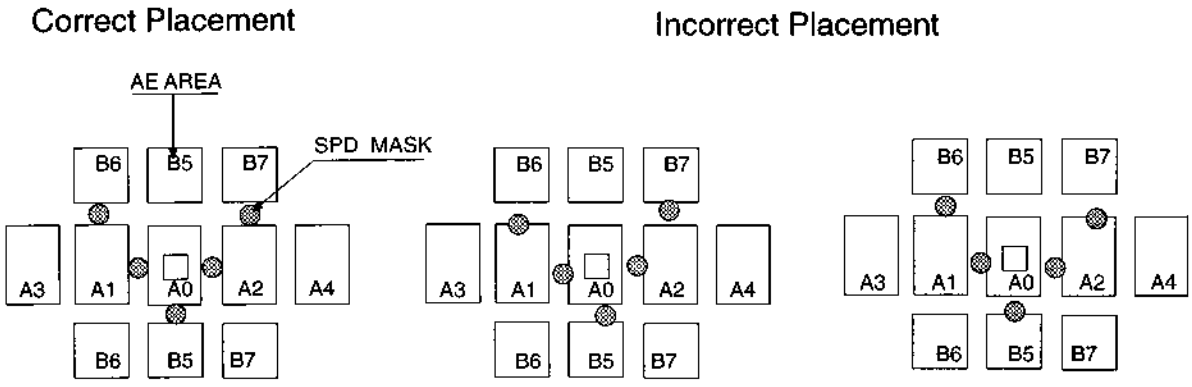


Fig. 3-90 SPC Positioning

4.7 AE Accuracy Adjustment

PURPOSE:

To adjust the output level, and gain, of SPD.

STANDARD:

Light source	Film Plane Illumination
EV9	0 ± 0.5 EV
EV12	0 ± 0.5 EV
EV15	0 ± 0.5 EV

TOOLS:

Personal computer
RS-232C cable
HS-I/F
Regulated DC power supply
Tool battery
Adjustment software (stored on a work disk)
EF-8000
EF50 mm *f*/1.8 production lens

PREPARATION:

1) Start adjustment program, connect the camera to the computer through the HS-I/F , and select (F2) AE Menu screen.
2) Attach the EF50 mm *f*/1.8 production lens to the camera and direct it toward the light source of the EF-8000 with the camera's eyepiece shielded from light so that it will not be affected by external light.

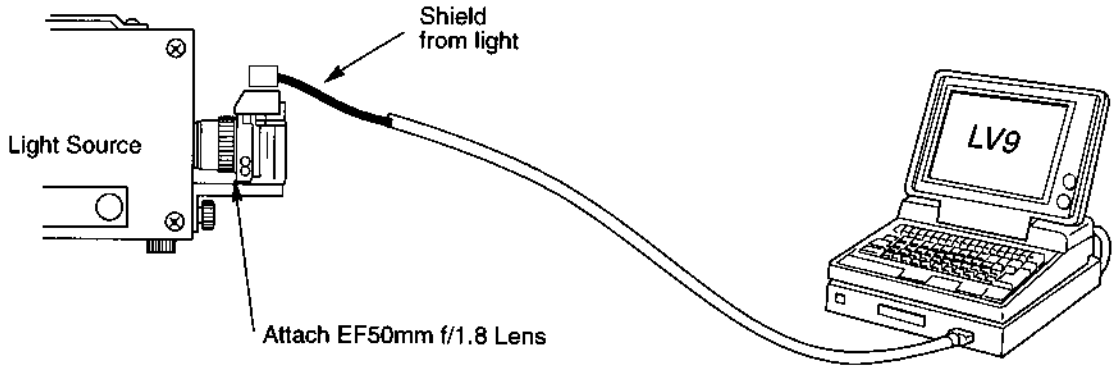
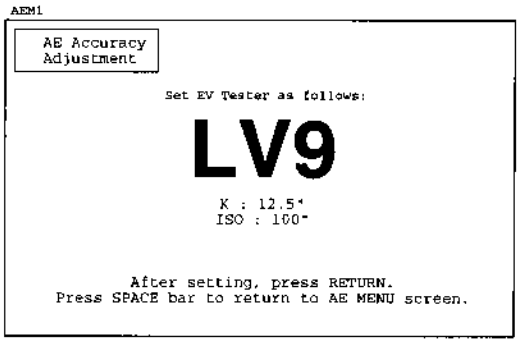


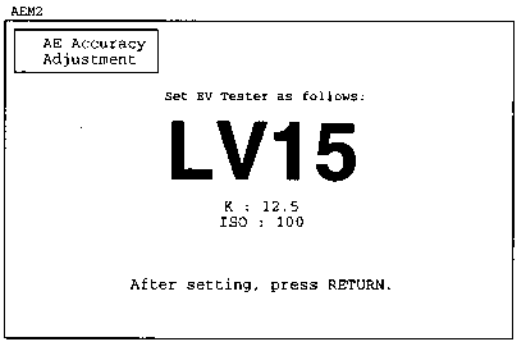
Fig 3-91 AE Accuracy Adjustment

ADJUSTMENT:

1) Select F2 AE Accuracy Adjustment on the AE menu screen.
2) Expose the camera to a brightness of LV9 and press the Return key.

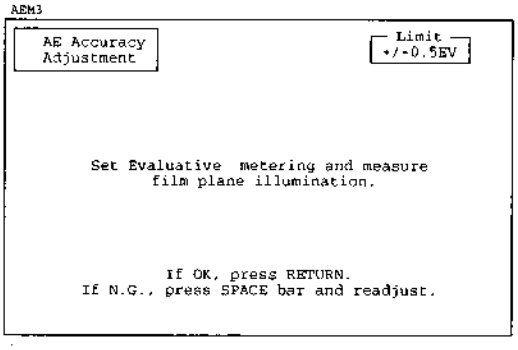


3) Expose the camera to a brightness of LV15 and press the Return key.



4) After completion of the communications, check whether AE accuracy conforms to the standard at LV9, LV12, and LV15 in the AE Program mode with evaluative metering.

   If not, press the Space bar and do the adjustment again.



4.8 AE Shift

PURPOSE:

AE shift is intended to shift the center exposure according to the users preference. Whereas AE accuracy adjustment adjusts the output level, and gain, of the SPD, AE shift adjusts only the level. AE accuracy adjustment clears and previously set AE shift.

TOOLS:

Personal computer
RS-232C cable
HS-I/F
DC regulated power supply
Tool battery
Adjustment software (stored on a work disk)
EF-8000
EF50 mm $f/1.8$ production lens

PREPARATION:

1) Start adjustment program, connect the camera to the computer through the HS-I/F , and select (F2) AE Menu screen.
2) Attach the EF50 mm $f/1.8$ production lens to the camera and direct it toward the light source of the EF-8000 with the camera's eyepiece shielded from light so that it will not be affected by external light.

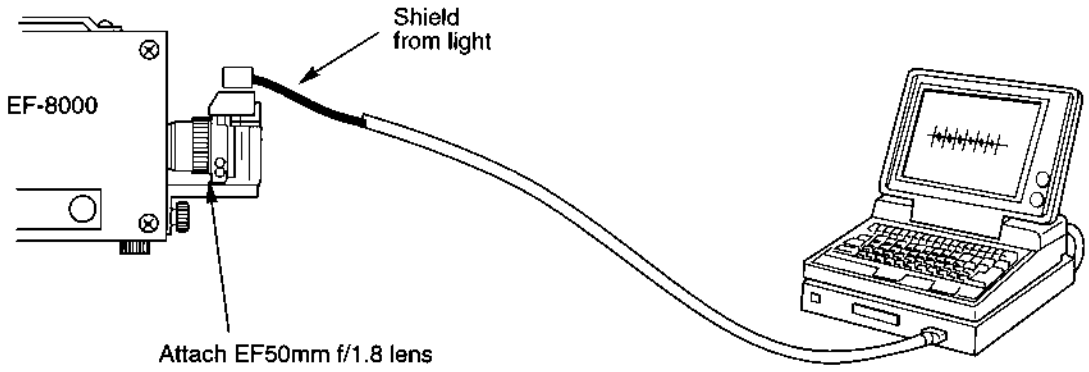
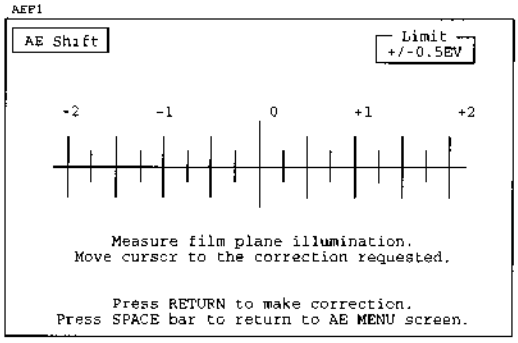


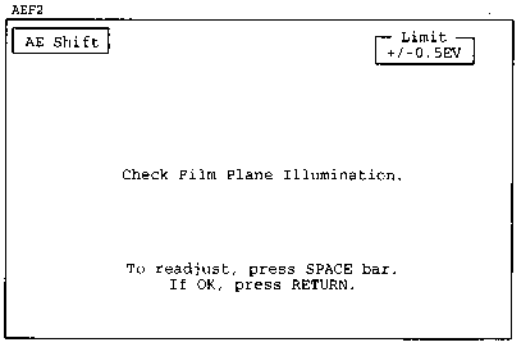
Fig. 3-92 AE Shift

ADJUSTMENT:

1) Select F3 AE Shift on the AE menu screen.
2) Move the cursor to select the desired amount of shift.Exposure can be incremented in about 0.25 stops. For example, to shift exposure by +1 stop, press the cursor keys to move the cursor to the position of +1.



3) After completion of the communications, check exposure at LV9, LV12, and LV15



4.9 AF Accuracy Adjustment

AF Accuracy adjustment must always be made when replacing the AF unit.

AF Accuracy adjustment is necessary if it is impossible to store or transfer camera data before replacing the main flex.Otherwise, this adjustment is unnecessary.

PURPOSE:

AGC adjustment:	Adjusting the gain to insure that the BASIS output waveform is sufficient but does not saturate.
DARK adjustment:	Correcting minute electric current that BASIS (AF sensor) will generate even in the absence of light (dark current).
Shading adjustment:	Compensates for bit-by-bit variations in the sensor output.

CAUTION AF Accuracy adjustment must always be preceded by AF sensor positioning. There must also be no dirt adhering to the main mirror, sub mirror, or light receiving section of the AF sensor.

TOOLS:

Personal computer	RS-232C cable	HS-I/F
DC regulated power supply		Tool battery
Adjustment software (stored on a work disk)		
EF-8000	EF50 mm *f*/1.8 production lens	
Light	Tripod	Dark bag
Charts (The EOS5 AGC chart is used		

PREPARATION:

1) Set the camera and AGC Chart as indicated.
2) Start adjustment program, connect the camera to the computer through the HS-I/F , and select (F3) AF Menu screen.

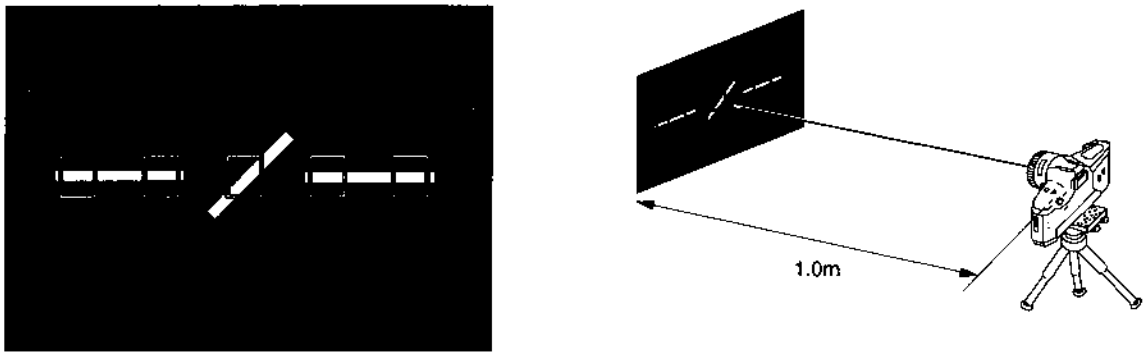
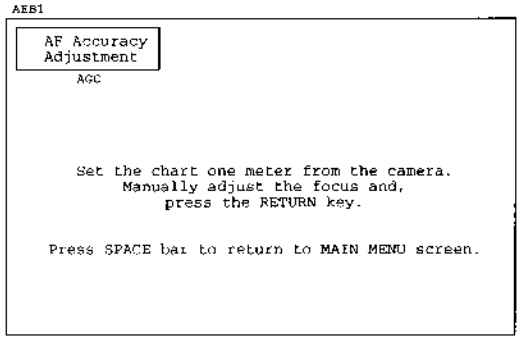
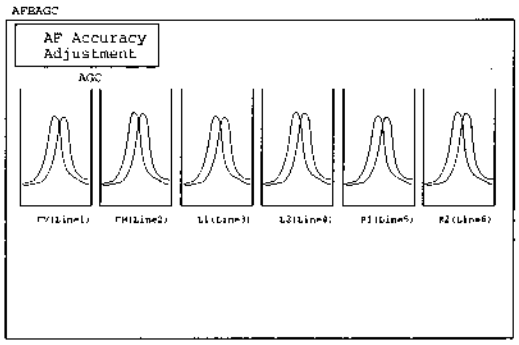


Fig. 3-93 AGC Adjustment

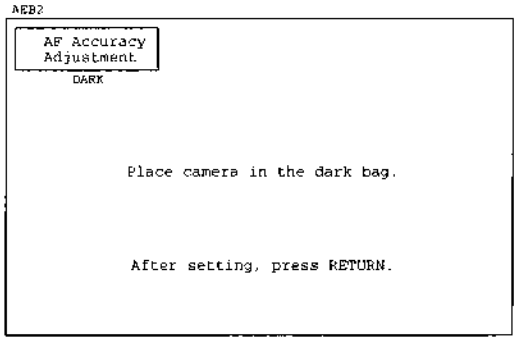
ADJUSTMENT:

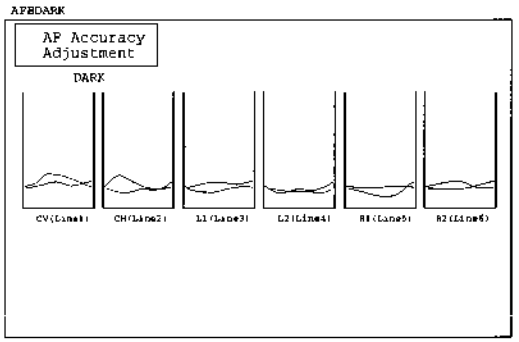
1) Call up the AF Accuracy Adjustment. The screen at the right appears. Insure setting is correct and press Return. The AGC will be adjusted.


AEB1
AF Accuracy Adjustment
AGC
Set the chart one meter from the camera.
Manually adjust the focus and,
press the RETURN key.
Press SPACE bar to return to MAIN MENU screen.



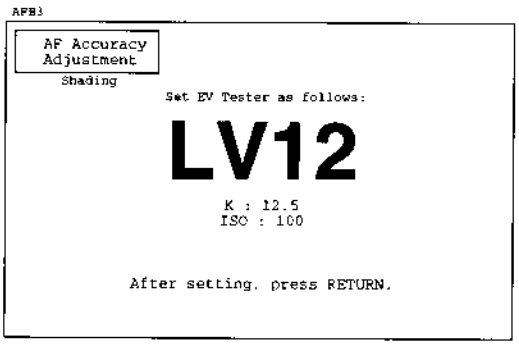
2) When AGC adjustment is complete this screen will appear. Place the camera in a dark bag and press Return.The dark adjustment will be completed.





3) After communications are complete, the screen at the right appears.Place the camera on the light source set to LV12 and press RETURN again.

   This completes this adjustment.The AF MENU screen will reappear.



4.10. AF Focus Adjustment

PURPOSE:

The purpose of the AF focus adjustment is to match the AF sensor focus with the film focus. Before this adjustment is made, the flange to focal plane distance (FFD) at the center of the pressure plate must be measured.

CAUTION The main mirror, sub mirror, and light receiving section of the AF sensor must be clean when making this adjustment.
Remember that the **correct FFD** to the center of the pressure plate for this camera is **44.18mm**, not 44.17mm

TOOLS:

Personal computer	RS-232C cable	HS-I/F
DC regulated power supply	PDB Tool battery	
Adjustment software (stored on a work disk)		
EF-8000	EF50 mm $f/1.8$ tool lens	
Light	Tripod	
Dial gage set (44.14 mm gage or 42.14+2 mm adapter)		

PREPARATION:

1) If the FFD was not recorded during the mechanical adjustments, return to page 3-35. To measure the FFD you must remove the pellicle mirror, set the camera at bulb and measure the FFD at the center of the pressure plate with a 44.14 mm gage (or 42.14+2 mm adapter).Record the reading, noting the 0.01mm difference in FFD standard for the EOS-1N RS.
2) Select the AF Adjustment Menu.
3) Set the camera and chart as indicated for AF Focus adjustment.

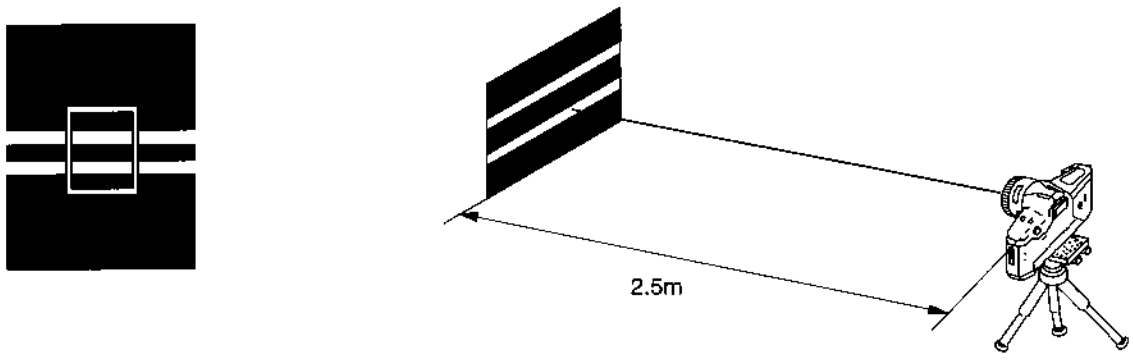
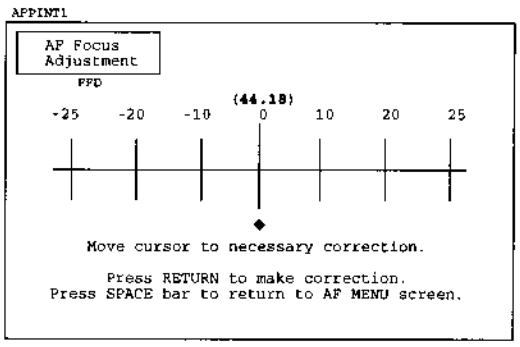


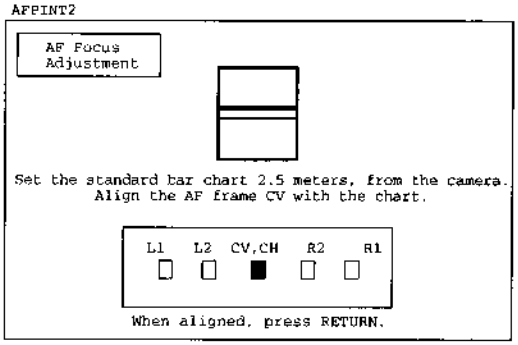
Fig .3-94 AF Focus Adjustment

ADJUSTMENT:

1) Select F2 AF Focus Adjustment on the AF menu screen to display the screen shown on the right. Move the cursor to the flange to focal plane distance (FFD) measured earlier.

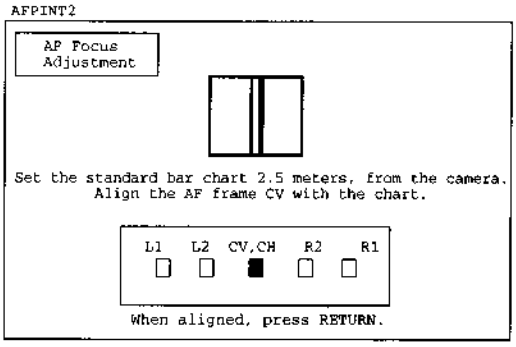

AFPINT1
AF Focus Adjustment
FFD
(44.18)
-25 -20 -10 0 10 20 25
Move cursor to necessary correction.
Press RETURN to make correction.
Press SPACE bar to return to AF MENU screen.

2) Press the Return key to display the screen shown at the right. Place the camera 2.5m ±10 mm away from the AF reference chart set with the bar horzontal, set the lens to infinity, and then manually focus it to the scribed 2.5m line. Align the center autofocus frame (CV) of the finder with the bars of the AF reference chart and press the Return key.


AFPINT2
AF Focus Adjustment
Set the standard bar chart 2.5 meters, from the camera.
Align the AF frame CV with the chart.
L1 L2 CV,CH R2 R1
When aligned, press RETURN.

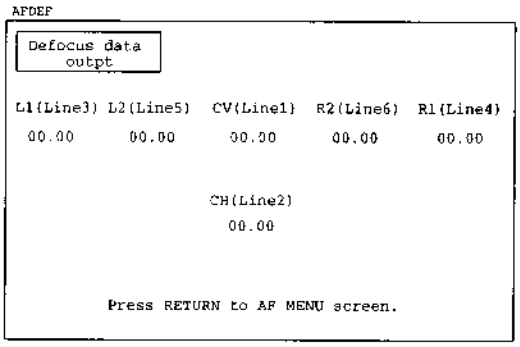
3) Flip the chart 90° as shown in the next screen so the bars are vertical,manually focus it to the scribed 2.5m line. Align the center autofocus frame (CH) of the finder with the bars of the AF reference chart and press the Return key.

4) Return the chart to the horizontal and repeat for the other focus areas L1 - R1. When adjustment is complete, return to the AF Menu.


AFPINT2
AF Focus Adjustment
Set the standard bar chart 2.5 meters, from the camera.
Align the AF frame CV with the chart.
L1 L2 CV,CH R2 R1
When aligned, press RETURN.

When using a tool lens with a focus variation label reading other than 0.00 proceed as follows.

Select F4 Defocus Data Output on the AF menu screen to display the screen shown at the right. Turn the focusing ring of the lens from the infinity end while observing the DEFOCUS indication. Stop the focusing ring when the DEFOCUS indication reaches a value which is equal to and which has an opposite sign to the variation marked on the tool lens. (See that GAIN is set to L.)



When the focusing ring is overturned, be sure to set it back to the infinity end and then turn it again.

(Example) When the defocus is +0.03, stop the focusing ring when the DEFOCUS indication reaches -0.03.

4) Press the Return key to return to the AF menu screen.

5) Press the F2 AF Focus Adjustment and repeat steps 1) through 3) to make AF focus adjustment again.

4.11 AF Sensor Dirt Check

PURPOSE:

To check the BASIS data output which can show if the sensor is dirty.

TOOLS:

Personal computer
RS-232C cable
HS-I/F
DC regulated power supply
Tool battery
Adjustment software (stored on a work disk)
EF-8000

PREPARATION:

Set the camera at the light source without a lens attached to the camera and the brightness of the light source set to LV12. (Be sure to shield the eyepiece from external light.)

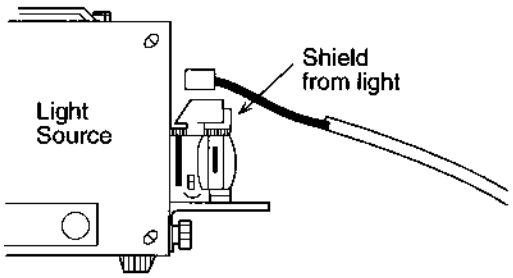
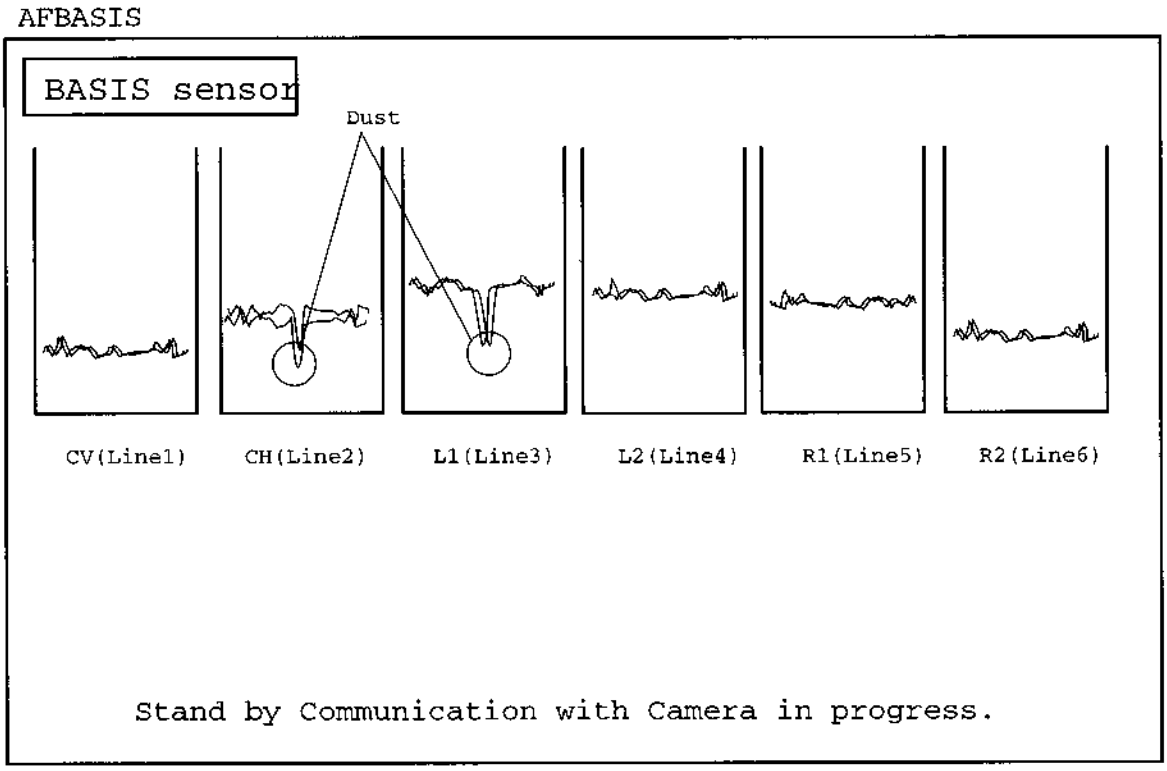


Fig. 3-95 AF Sensor Dust Check

Select F3 Basis Sensor Data Output on the AF menu screen to display the image data.

Check whether the output waveform is linear. If not, dust may be on the AF sensor.



4.12 Defocus Data Check

PURPOSE:

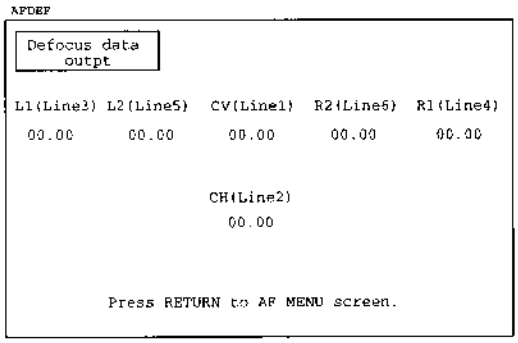
This procedure is used to check the AF focus adjustment.

TOOLS:

Personal computer
RS-232C cable
HS-I/F
Regulated DC power supply
Tool battery
Adjustment software (stored on a work disk)
Light
Tripod
AF reference chart, 16 mm bar chart, and 45° chart

CONFIRMATION PROCEDURE:

1) Set the charts and camera as indicated in AF Focus Adjustment (Section 4.10)
2) Select the F3 AF Adjustment Menu.
3) Focus with AF on the chart, and then switch the lens to manual.
4) Select F4 Defocus Data Output. Switch to the various charts .Focus with AF on each chart, and check that the results are within the listed limits.



	AF Reference Chart			16mm Bar Chart			45 Bar Chart		
	CV	CH	L&R	CV	CH	L&R	CV	CH	L&R
50mm f/1.8 Tool Lens	± 0.030	± 0.030	± 0.039	± 0.030	± 0.060	± 0.080	± 0.070	± 0.090	± 0.130

Cumulative Releases	Defocus Standard
Below 10,000 releases	As above
10,001 to 40,000 releases	1.2 times above tolerances
40,001 to 70,000 releases	1.4 times above tolerances
70,001 to 100,000 releases	1.6 times above tolerances

Table 3-2 Defocus Standards

4.13 AF Focus Shift

PURPOSE:

To correct minute AF defocus that many result from use of a lens with very shallow depth of focus, such as EF 50 *f*/1.0 L and EF 86 *f*/1.2 L.

AF focus shift must never be used to correct defocus caused by any lenses other than EF 50 *f*/1.0 L or EF 85 *f*/1.2 L.

MINUTE DEFOCUS:

EOS Series cameras and lenses are designed so that their defocus does not exceed standard values of 0+0.03 mm and 0+0.02 mm respectively. EF50 *f*/1.0 L and EF85 *f*/1.2 L also conform to these standards. However, both these lenses have very shallow depth of focus. Therefore, when used together with a camera whose defocus has the same sign, the lenses may exceed the acceptable depth of focus even if the defocus of both the lenses and the camera conform to the standards. In this event, the user of the lenses may complain of unsharp focus.

Example) Unsatisfactory combination of camera and lens (Camera: 0+0.03 mm Lens: 0+0.02 mm)

AF focus shift is intended to correct total AF defocus resulting from use of a particular camera in combination with a lens with a shallow depth of focus. Therefore, AF focus shift must always be made on that camera and lens.

AF focus shift must also be made after adjusting both the camera and lens.

A lens with a shallow depth of focus may prove in focus without AF focus shift despite is user's complaint. This phenomenon can be attributed to the following:

(1) Variations in range measurement that result from shooting of an object difficult to focus.

(2) Shift of an object in the period between turning on of SW2 and exposure.

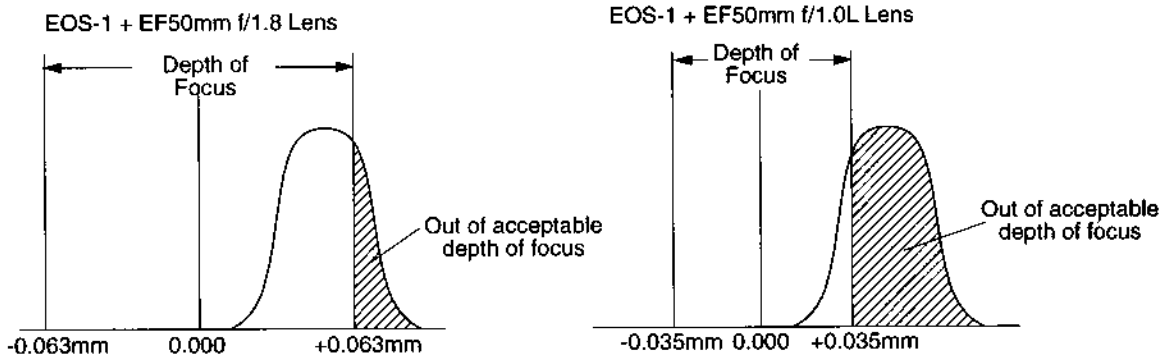


Fig. 3-96 Minute Defocus

TOOLS:

Personal computer
RS-232C cable
HS-I/F
DC regulated power supply
Tool battery
Adjustment software (stored on a work disk)
Light
Tripod
AF reference chart

PREPARATION:

1) Set lighting equipment etc. for AF Focus Adjustment.
2) Select the F3 AF Adjustment Menu.
3) Set the AF reference chart 2.5m ± 10mm from the camera.

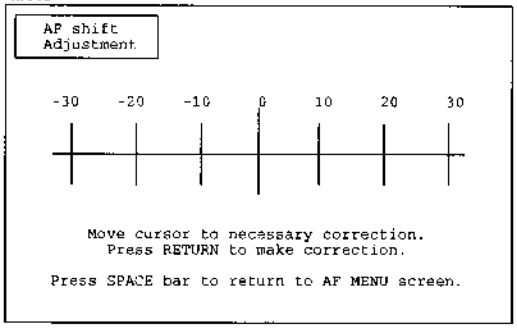
ADJUSTMENT:

1) Select AF Focus Shift on the AF menu screen to display this screen. Move the cursor to the position of -30 and press Return.
2) Attach the lens and press SW1 to focus and shoot the object ten times (with the aperture fully open).
3) After shooting, confirm that the screen shown at the right appears. Press the Space key to return to the screen displayed in step 1). Move the cursor to the position of +30 and press Return to reset the AF focus shift to zero.

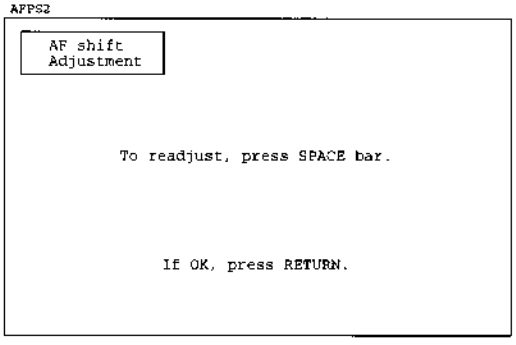
   Shoot the object ten times in the same manner as in step 2).
4) Press the Space key to return to the screen displayed in step 1). Move the cursor to the position of +30 and press the Return key. Shoot the object ten times as in step 2).
5) Press the Space key to return to the screen displayed in step 1). Move the cursor to the position of -30 and press Return to reset the AF focus shift amount to zero. Review the results obtain-ed from shooting on the screen displayed in step 1) and select the optimum one.

   Press the Return key to complete AF focus shift.

AFPS1



AFPS2



<MEMO>

4.14 FLASH ADJUSTMENT

If the main flex or TTL (OTF) sensor is replaced, this adjustment is mandatory. If this adjustment is done, the shutter adjustment must be done after it.

PURPOSE:

To adjust the output level and gain of the flash sensor for correct flash film plane exposure.

STANDARD:

Average ±1EV or less

TOOLS:

Personal computer	RS-232C cable	HS-I/F
DC stable power	Tool battery	

Adjustment program (stored on a work disk)
EF-8000 (Direct flash sensor DIR201)
EF50 mm *f*/1.8 production lens
Speedlite (300 EZ, 420 EZ, or 430 EZ)
Tripod

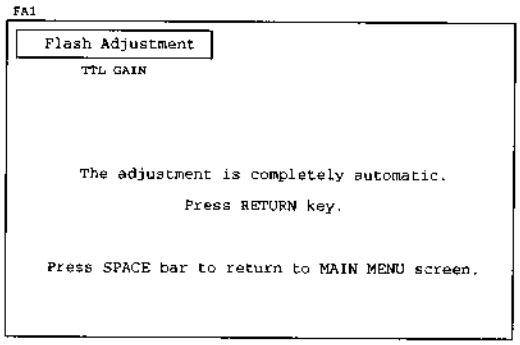
Ambient light should be under EV3. If a dark room is not available, establish a test area with stable conditions and no highly reflective objects. Test about ten cameras from stock and establish an average.

PREPARATION:

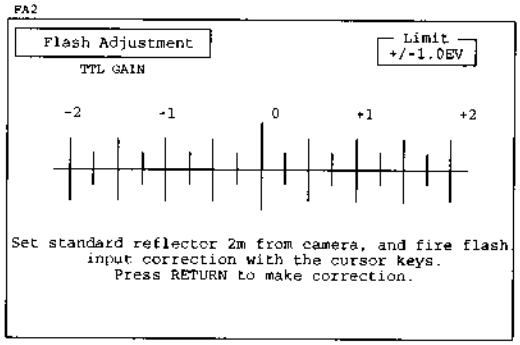
1) Run the adjustment software, and select F4 Flash Adjustment.
2) Fix the camera on the tripod and attach the EF50 mm *f*/1.8 production lens and speedlite to the camera.Set the camera to ISO 100, shutter to 1/250, and aperture to about f/5.6. Set the speedlite in TTL mode and position the camera 2m ± 10mm away from the reflector.

ADJUSTMENT:

1) Gain adjustment is automatic. Press Return.

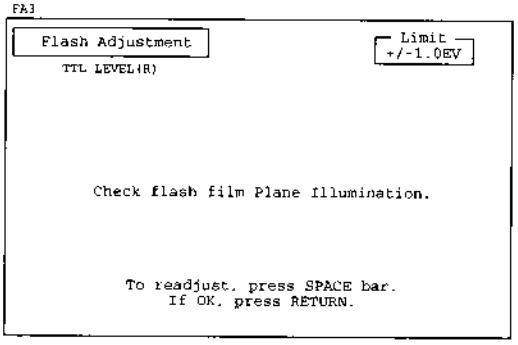


2) After the gain adjustment, the level of the right sensor is adjusted. Measure the flash accuracy of the camera several times and use the cursor keys to move the cursor to the position of a desired value for correcting the measured flash accuracy. Press the Return key.



3) Check the flash level in accordance with the directions displayed on the screen. If the flash accuracy is acceptable, press the Return key to go to the next sensor automatically. If flash level is not correct, press the Space bar and readjust.

4) Cary out the adjustment for the center and left sensor using the same method as the right sensor.



4.15 INHIBIT VOLTAGE ADJUSTMENT

Inhibit voltage check must always be made when replacing the main flex.

PURPOSE:

To insure the operating accuracy of individual parts of the camera by setting the minimum voltage for camera operation.

TOOLS:

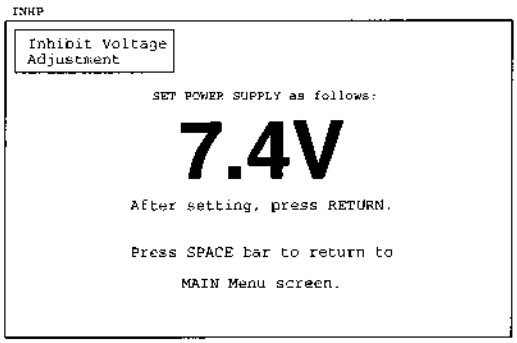
Personal computer RS-232C cable HS-I/F
DC stable power Tool battery (Power Drive Booster type)
Adjustment program (stored on a work disk)
EF50 mm *f*/1.8 production lens
Digital tester

PREPARATION:

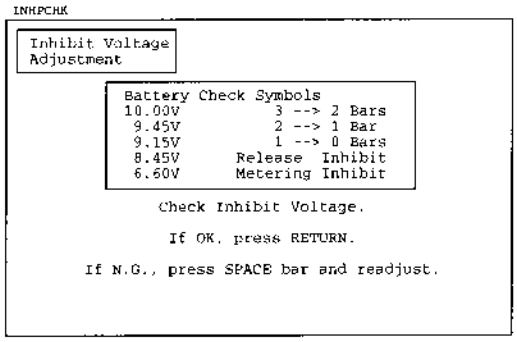
Start adjustment program, connect the camera to the personal computer, and select F5 Inhibit Voltage Adjustment on the menu screen.

ADJUSTMENT:

1) Set supply voltage as indicated on the screen and press the Return key.



2) Check the inhibit voltage as indicated on the screen starting with the highest voltage and work downward.



4.16 Superimpose Screen (SI) Brightness Adjustment

SI screen brightness must always be checked when replacing the main flex. This adjustment can only be done after the AE Accuracy adjustment is finished.

PURPOSE:

To adjust the SI screen brightness to the appropriate level.

TOOLS:

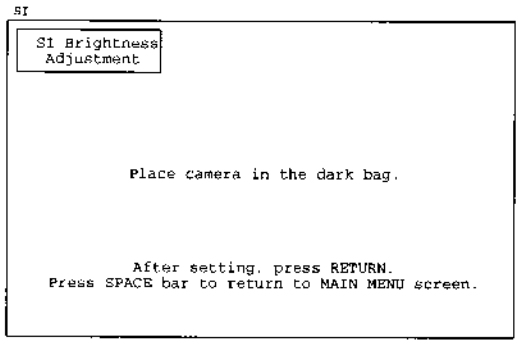
Personal computer
RS-232C cable
HS-I/F
DC stable power
Tool battery
Adjustment program (stored on a work disk)
Dark Bag

PREPARATION:

Start adjustment program, connect the camera to the personal computer, and select F6 SI Brightness Adjustment.

ADJUSTMENT:

1) As indicated on the screen, place the camera in the dark bag and press Return. The adjustment is automatic.
2) Select each focus mark and check the brightness to determine if the adjustment is correct. Select all focus marks to check for even brightness on all marks.


SI
SI Brightness Adjustment
Place camera in the dark bag.
After setting, press RETURN.
Press SPACE bar to return to MAIN MENU screen.

4.17 SELF CHECK

Self check can be classified into the following types:

PREPARATION:

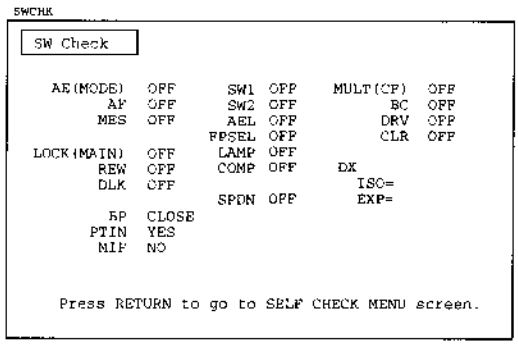
Start adjustment program, connect the camera to the personal computer, and select F7Self Check on the menu screen to display the self check menu screen. Select the required screen.

F1. SW check:

S2. LCD check:

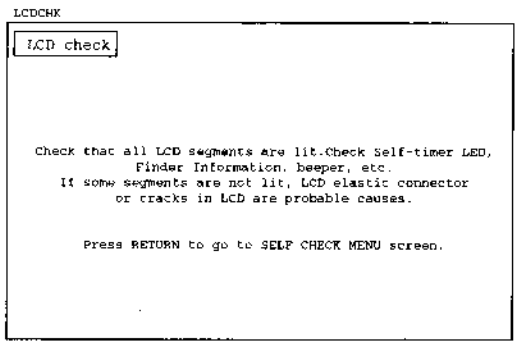
SW CHECK:

Press the F1 key to display the screen. Any switch whose state fails to coincide with that displayed on this screen is suspected of being faulty.Press the Return key to return to the self check menu screen.



LCD CHECK:

Press the F2 key to display this screen. Any LCD which fails to come on at this time is suspected of being faulty.Press the Return key to return to the self check menu screen.


LCDCHK
LCD check
Check that all LCD segments are lit.Check Self-timer LED,
Finder Information, beeper, etc.
If some segments are not lit, LCD elastic connector
or cracks in LCD are probable causes.
Press RETURN to go to SELF CHECK MENU screen.

4.18 DATA TRANSFER

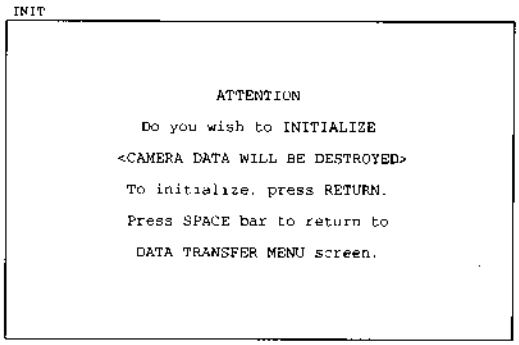
The data transfer menu consist of five operations:

1. **Initialization:** Transferring default data to the camera and setting the model designation if it was impossible to store camera data before replacing the main flex.
2. **Storage:** Storing camera data in the PC.
3. **Transfer:** Transferring stored camera data back to the camera.
4. **Temperature compensation:** Storing temperature corrections in the memory of the camera to correct measuring errors made by the internal thermometer of the camera. This data is used in the AE and AF sequences.)
5. **Counter Reset:** This resets the internal frame counter to zero.

Initialization

PROCEDURE:

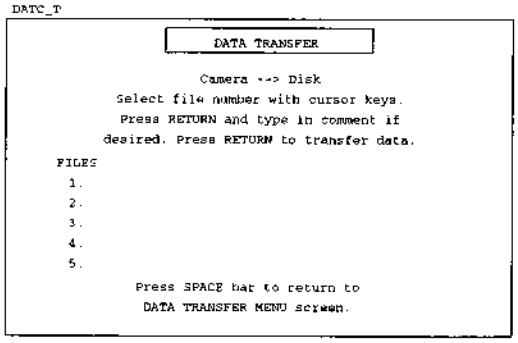
Confirm that the screen shown appears. When choosing to initialize camera data, press the Return key. Otherwise, press the Space key to return to the data transfer menu screen.



Storage

PROCEDURE:

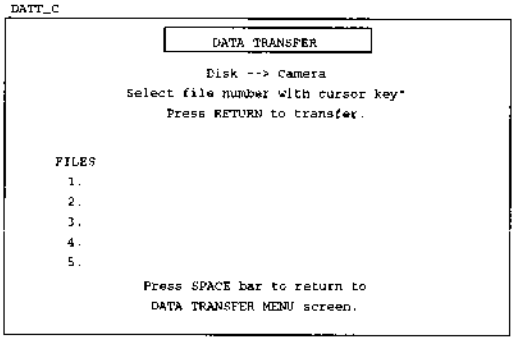
Press the F2 key to display the screen shown at the right. Press the cursor keys to move the cursor to the file position in which camera data is to be stored. Press the Return key to move the cursor to the comment column and enter your comment. Then, press the Return key again to return to the data transfer menu screen.



Transfer

PROCEDURE:

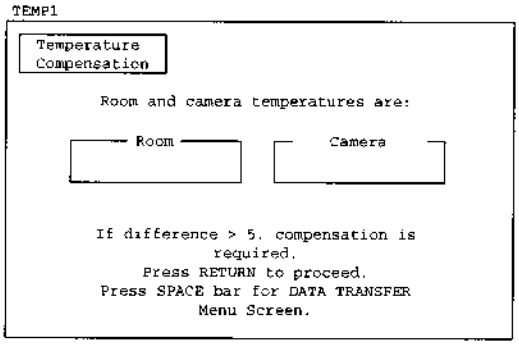
Press the F3 key to display the screen shown at the right. Press the cursor keys to move the cursor to the position of a file which contains the camera data to be transferred to camera.Press the Return key to transfer the data back to the camera. After communications are completed, the data transfer menu screen will reappear.



Temperature Compensation

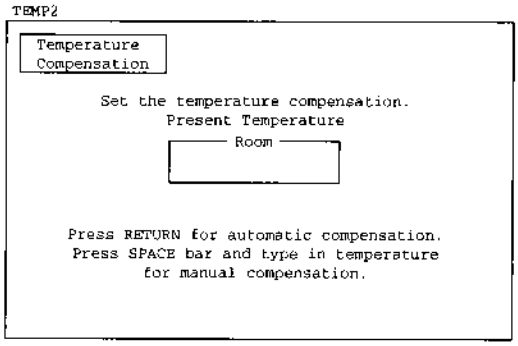
PROCEDURE:

Press the F4 key to display this screen, showing the room temperature measured by the HS-I/F and the temperature measured by the camera. Check whether there is a difference of more than 3°C between the two.



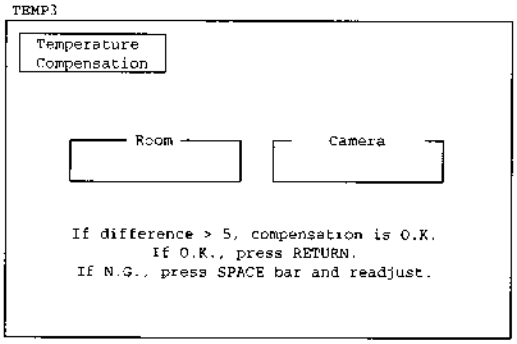
If so, press the Return key to display the next screen showing the room temperature measured by HS-I/F. Check whether the room temperature is normal. If so, press the Return key to return to the data transfer menu screen.

If not, press the Space key to move the cursor to the position of the room temperature. Then, press the numeric keys to enter actual room temperature measured with a thermometer.



Press the Return key to display the next screen , showing the room temperature measured by HS-I/F and the temperature measured by the camera. Check whether there is a difference of more than 3°C between the two.

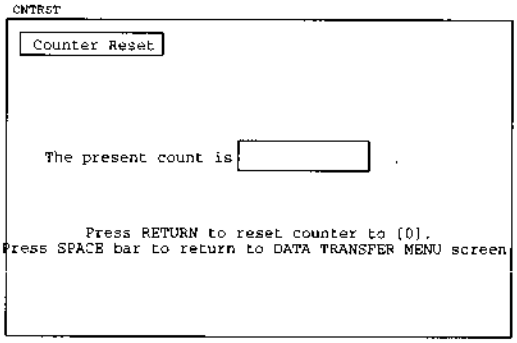
If so, press the Space key to correct the room temperature again. If not, press the Return key to the data transfer menu screen.



Counter Resetting

PROCEDURE:

When F5 Counter Reset is selected, this screen appears.
Press Return to reset the counter to zero.
Press the Space bar to return to the data transfer menu screen without resetting the counter.


CNTRST
Counter Reset
The present count is
Press RETURN to reset counter to [0].
Press SPACE bar to return to DATA TRANSFER MENU screen.

Part 4

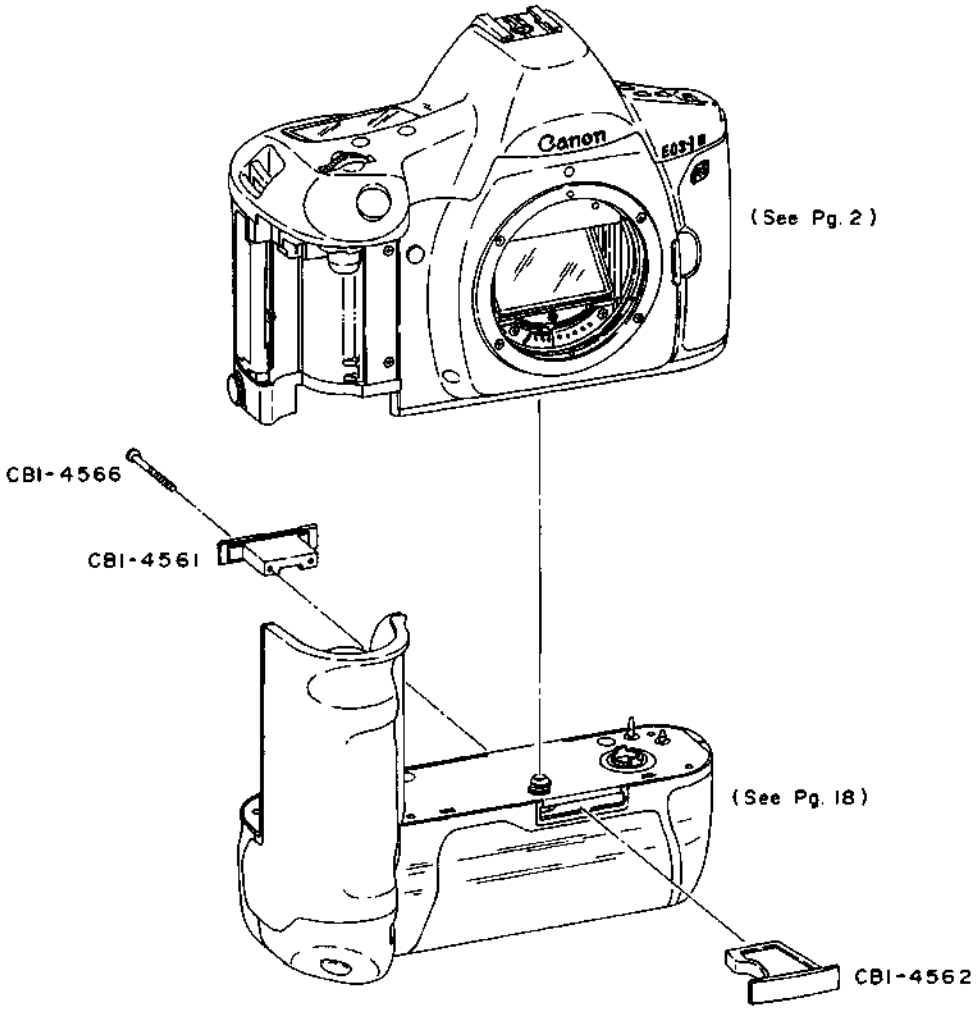
Parts Catalog

Canon

EOS-1N RS C12-8311

PARTS CATALOG

CANON EOS-1N RS



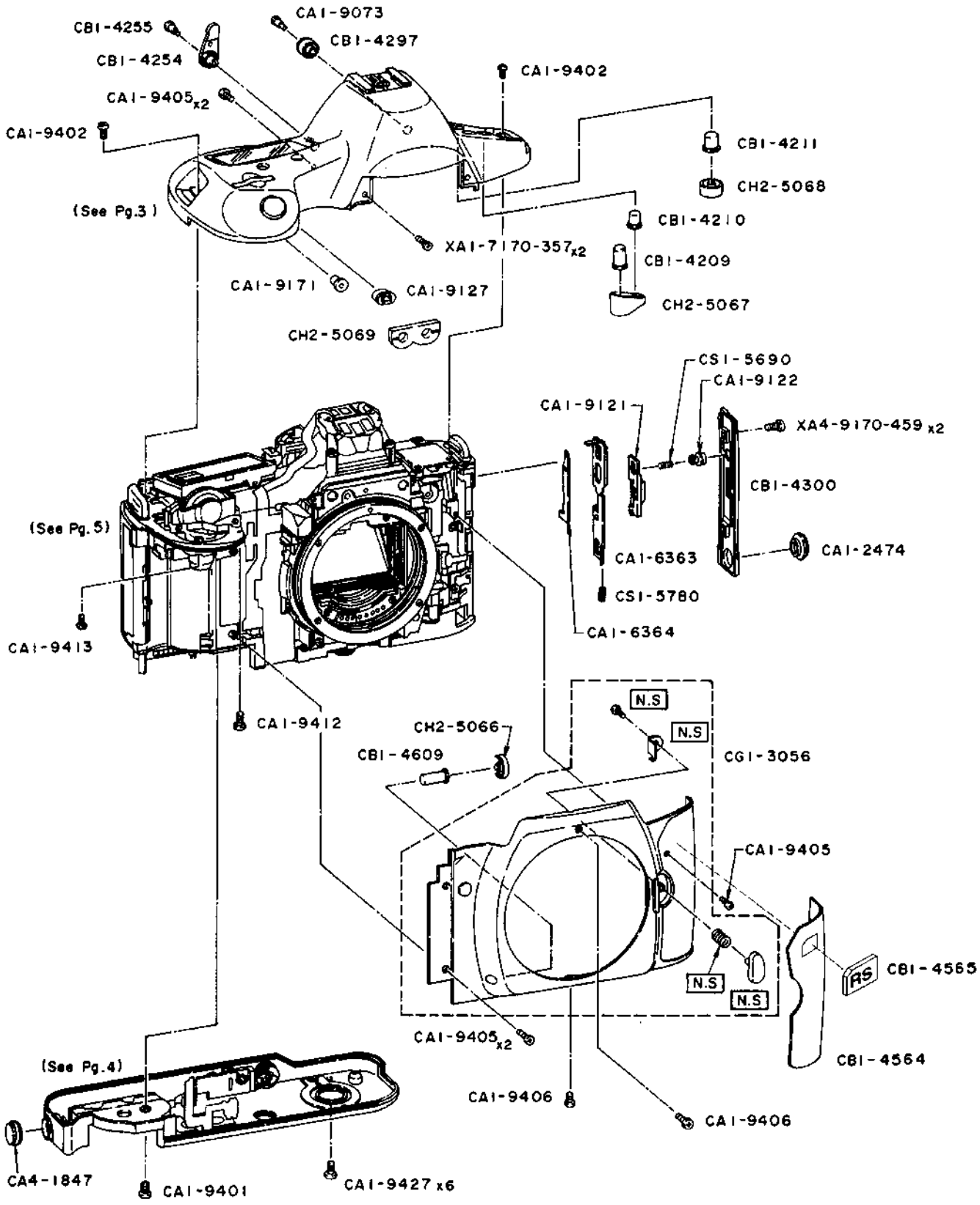
PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
*	CB1-4561-000	D	1	COVER,REAR BLIND	目隠し蓋（後）
*	CB1-4562-000	D	1	COVER,FRONT BLIND	目隠し蓋（前）
*	CB1-4566-000	-	1	SCREW, CROSS RECESS PH	

REF. NO. C12-8311

CANON EOS-1 N RS



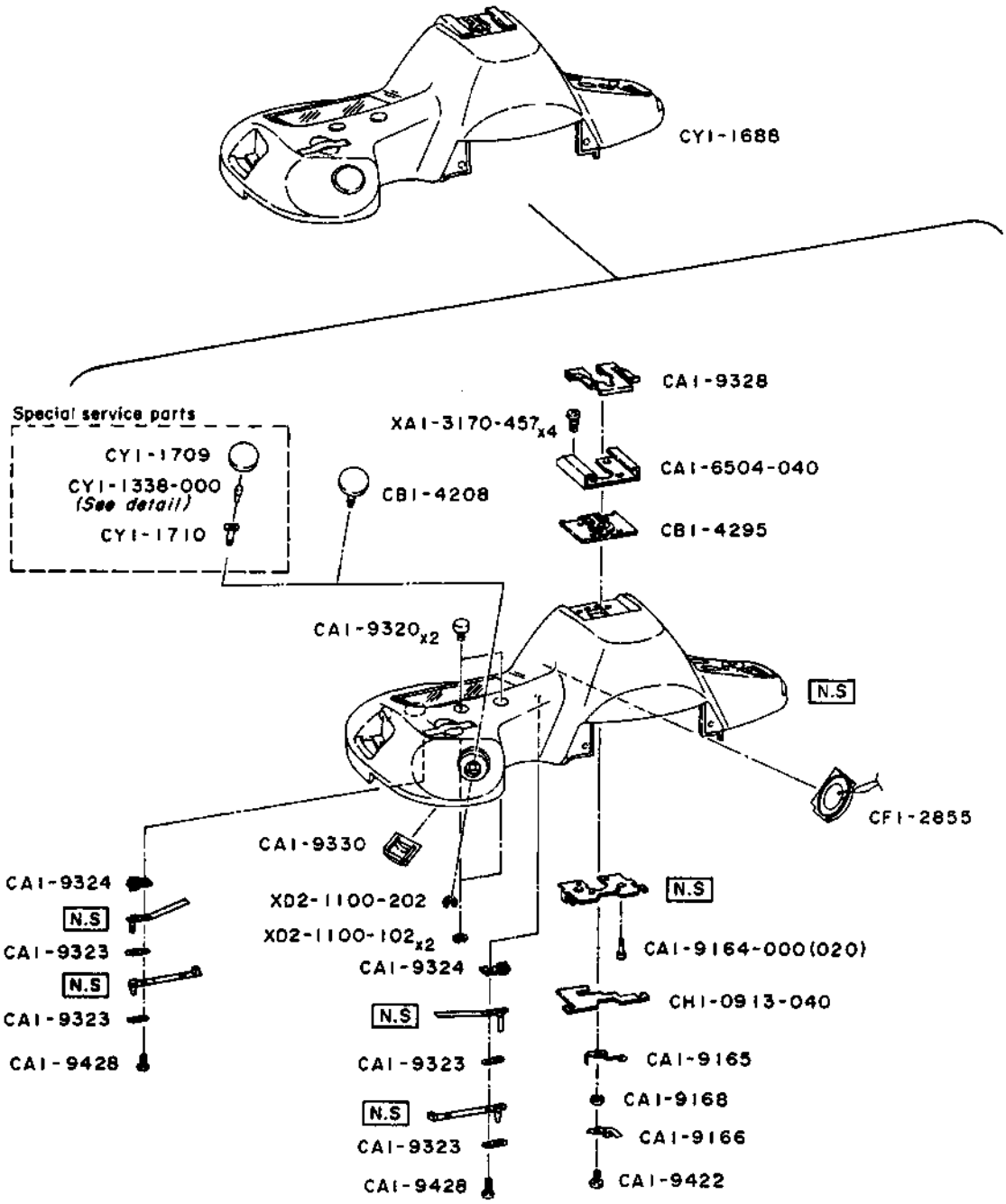
PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-2474-000	A	1	CAP,P.C TERMINAL	P.Cターミナルキャップ
	CA1-6363-000	E	1	HOOK	フック
	CA1-6364-000	E	1	LEVER,LOCK	ロックレバー
	CA1-9073-000	D	1	SHAFT,EYEPIECE ADJUSTING	視度調ダイアル軸
	CA1-9121-000	D	1	LEVER,LATCH	ラチェットレバー
	CA1-9122-000	E	1	BUTTON,LATCH	ラッチロックボタン
	CA1-9127-000	E	1	BUTTON,AE LOCK	AEロックボタン
	CA1-9171-000	E	1	BUTTON,AV	AVボタン
	CA1-9401-000	-	1	SCREW, CROSS RECESS PH	
	CA1-9402-000	-	2	SCREW, CROSS RECESS PH	
	CA1-9405-000	-	5	SCREW, CROSS RECESS PH	
	CA1-9406-000	-	2	SCREW, CROSS RECESS PH	
	CA1-9412-000	-	1	SCREW, CROSS RECESS PH	
	CA1-9413-000	-	1	SCREW, CROSS RECESS PH	
	CA1-9427-000	-	6	SCREW, CROSS RECESS PH	
	CA4-1847-000	D	1	CAP, TERMINAL	リモコンキャップ
	CB1-4209-000	C	1	BUTTON,MODE1	モード1ボタン
	CB1-4210-000	C	1	BUTTON,MODE2	モード2ボタン
	CB1-4211-000	C	1	BUTTON,MODE3	モード3ボタン
	CB1-4254-000	D	1	LEVER,EYEPIECE SHUTTER	アイピースシャッターレバー
	CB1-4255-000	-	1	SCREW, CROSS RECESS PH	
	CB1-4297-000	C	1	DIAL,EYEPIECE ADJUSTING	視度調ダイアル
	CB1-4300-000	D	1	COVER,LATCH	ラッチカバー
*	CB1-4564-000	C	1	COVER,FRONT PANEL	エプロンカバー
*	CB1-4565-000	D	1	PLATE,NAME	ネームプレート（RS）
	CB1-4609-000	D	1	BUTTON,STOP DOWN	深度確認ボタン
	CG1-3056-000	C	1	FRONT COVER UNIT	エプロンユニット
	CH2-5066-000	D	1	SWITCH,STOP-DOWN	ストップダウンスイッチ
	CH2-5067-000	D	1	SWITCH,MODE	モードスイッチ
	CH2-5068-000	D	1	SWITCH,METERING MODE	モードスイッチゴム
	CH2-5069-000	D	1	SWITCH,AE LOCK	モードスイッチゴム
	CS1-5690-000	D	1	SPRING,COIL	コイルバネ
	CS1-5780-000	D	1	SPRING,COIL	コイルバネ
	XA1-7170-357	-	2	SCREW, CROSS RECESS PH	
	XA4-9170-459	-	2	SCREW, CROSS RECESS PH	

3

CANON EOS-1[N] RS



CY1-1338-000 detail ⊛STANDARD

	A	B	SIZE	A	B	SIZE	A	B	SIZE	A	B	SIZE
	1.0mm	2.8mm	(001)	1.5mm	2.8mm	(004)	2.0mm	2.8mm	(007)	2.5mm	2.8mm	(010)
		3.0mm	(002)		3.0mm	(005)⊛		3.0mm	(008)		3.0mm	(011)
		3.2mm	(003)		3.2mm	(006)		3.2mm	(009)		3.2mm	(012)

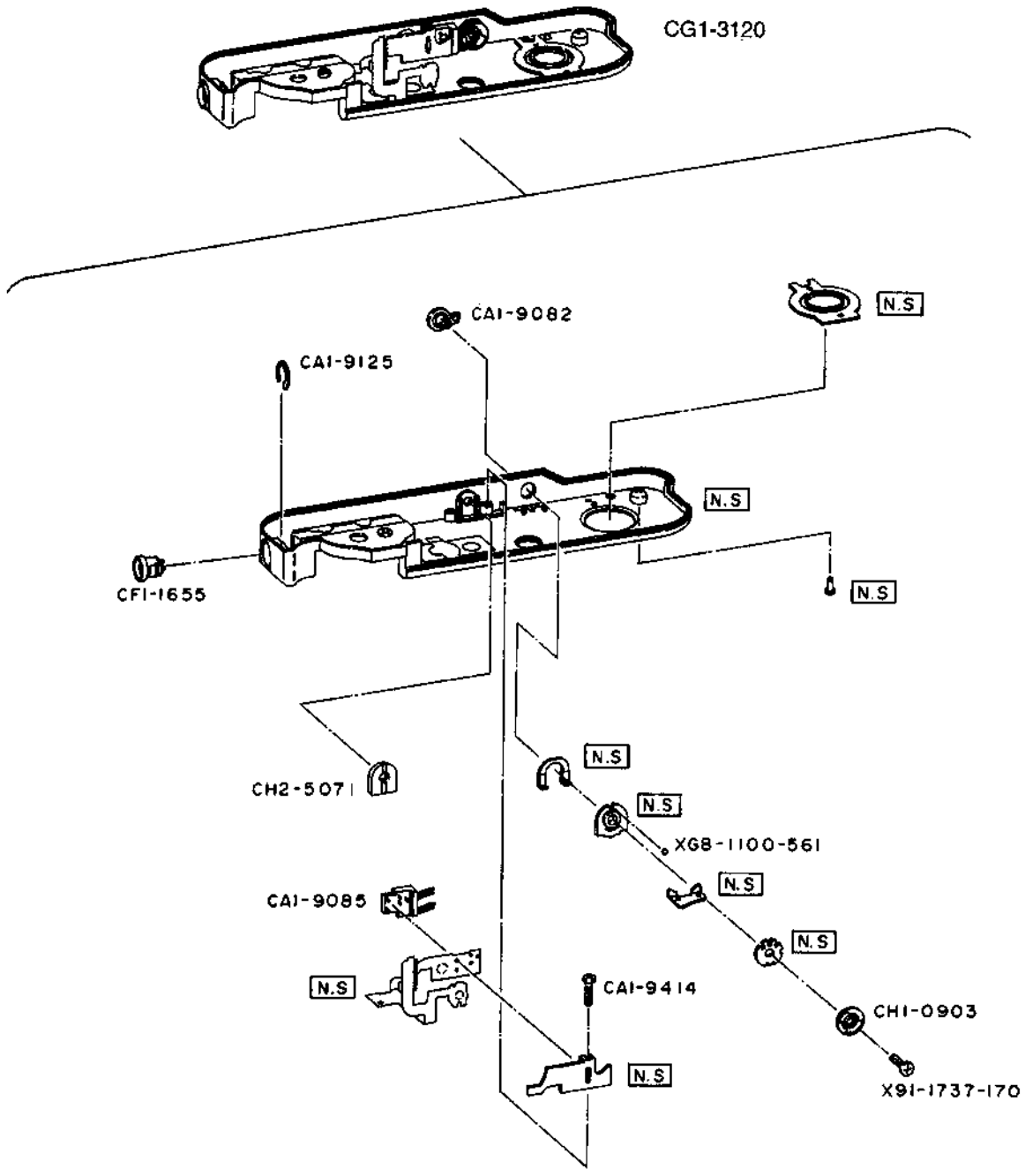
PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-6504-040	D	1	SHOE,ACCESSORY	アクセサリーシュー
	CA1-9164-000(020)	E	1	PIN,FLASH	ストロボピン
	CA1-9165-000	D	1	CONTACT,SHOCK PREVENTION	ビリ防止接片
	CA1-9166-000	D	1	CONTACT,X	X接片
	CA1-9168-000	D	1	SPACER,INSULATING	ビリ防止スペーサー
	CA1-9320-000	C	2	BUTTON,LAMP	ランプボタン
	CA1-9323-000	E	4	SPACER,L	Lスペーサー
	CA1-9324-000	E	2	BASE,CONTACT	接片台
	CA1-9328-000	C	1	SPRING,PLATE	板スプリング
	CA1-9330-000	E	1	CAP,LIGHT SHIELD	遮光キャップ
	CA1-9422-000	-	1	SCREW, CROSS RECESS PH	
	CA1-9428-000	-	2	SCREW, CROSS RECESS PH	
	CB1-4208-000	C	1	BUTTON,RELEASE	レリーズボタン
	CB1-4295-000	E	1	BASE,PLATE	アクシュー台
	CF1-2855-000	E	1	BEEPER	ビーパー
	CH1-0913-040	E	1	TOP FLEX	トップカバーフレキ
	CY1-1338-000(XXX)	D	1	SHAFT,ADJUSTING	調整軸
	CY1-1688-000	C	1	TOP COVER UNIT	上蓋ユニット
	CY1-1709-000	C	1	BUTTON,RELEASE	レリーズボタン
	CY1-1710-000	D	1	SHAFT,RELEASE BUTTON	レリーズボタン軸
	XA1-3170-457	-	4	SCREW, CROSS RECESS ,FCH	
	XD2-1100-102	-	2	E RING	
	XD2-1100-202	-	1	WASHER,RETAINING	

REF. NO. C12-8311

CANON EOS-1[N] RS

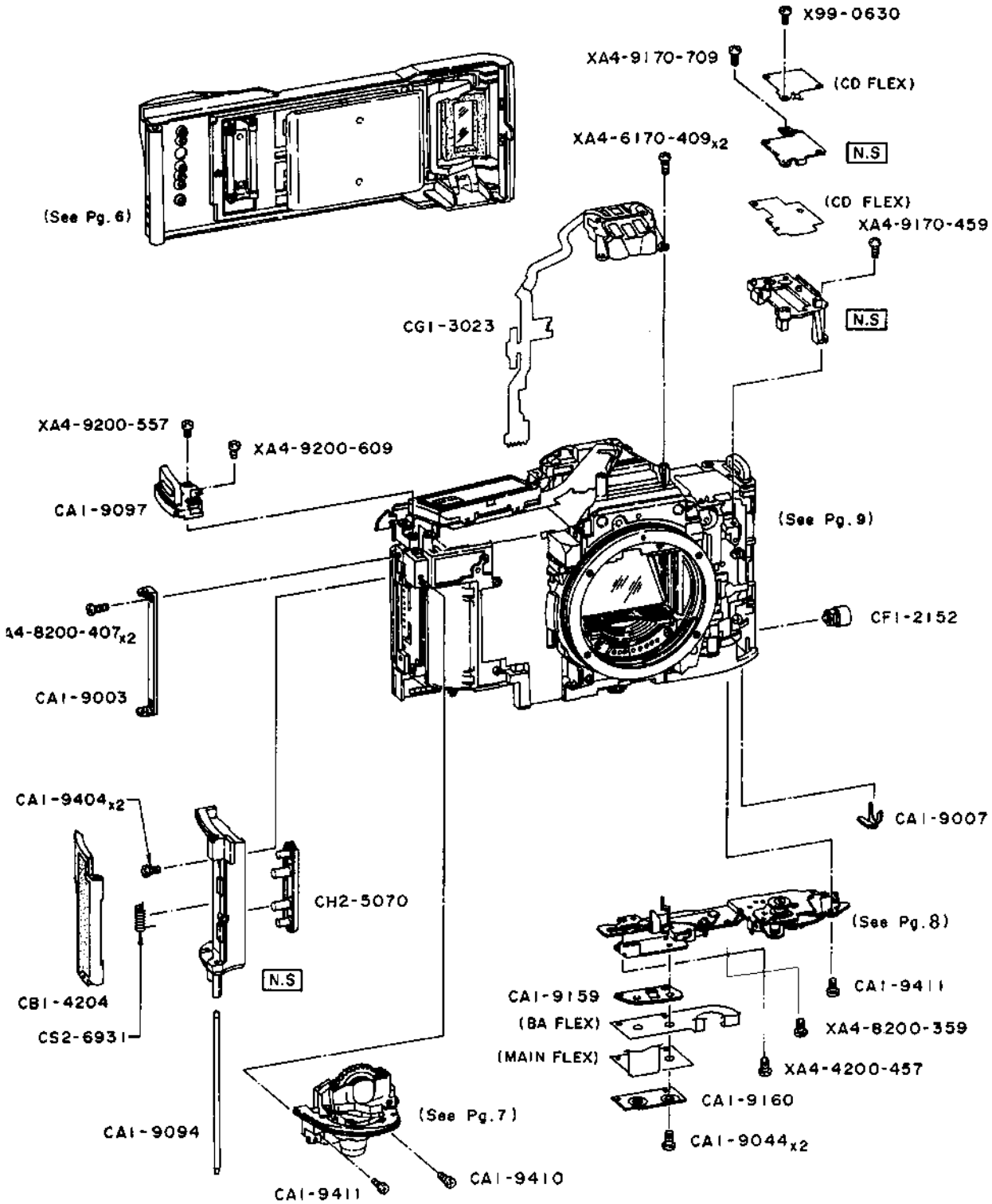


PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-9082-000	C	1	LEVER,MAIN SWITCH	メインスイッチカバー
	CA1-9085-000	D	1	CONTACT,MAIN SWITCH	メインスイッチ接点
	CA1-9125-000	C	1	RING,C	Cリング
	CA1-9414-000	-	1	SCREW, CROSS RECESS PH	
	CF1-1655-000	C	1	JACK,REMOTE CONTROL	リモコンジャック
*	CG1-3120-000	C	1	BASEPLATE UNIT	底蓋ユニット
	CH1-0903-000	D	1	BOARD,MAIN SWITCH	メインスイッチ基板
	CH2-5071-000	E	1	SWITCH , REWIND	巻き戻しスイッチゴム
	X91-1737-170	-	1	SCREW, CROSS RECESS PH	
	XG8-1100-561	-	1	BALL,STEEL	ボール

CANON EOS-IN RS

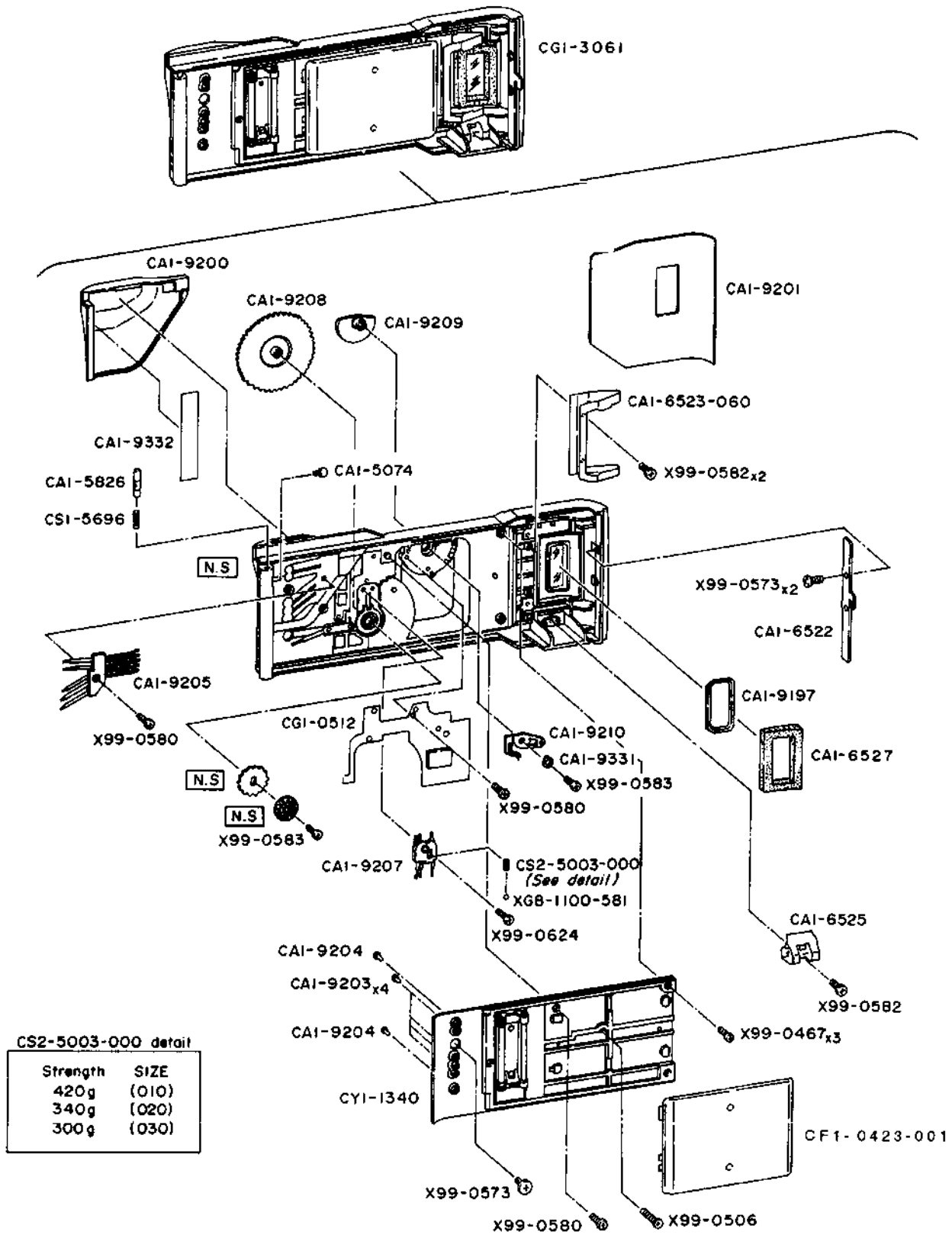


PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-9003-000	E	1	HINGE,BACK COVER	背蓋ヒンジ
	CA1-9007-000	D	1	RING,PC RETAINER	PCリティナーリング
	CA1-9044-000	-	2	SCREW, CROSS RECESS PH	
	CA1-9094-000	D	1	SHAFT,PALM WING	パームウィング軸
	CA1-9097-000	C	1	LUG,NECK STRAP(RIGHT)	耳環（右）
	CA1-9159-000	D	1	PAD,FLEX CONNECTION	フレキコネクトゴム
	CA1-9160-000	E	1	BASE,FLEX CONNECTION	フレキコネクト押さえ
	CA1-9404-000	-	2	SCREW, CROSS RECESS PH	
	CA1-9410-000	-	1	SCREW, CROSS RECESS PH	
	CA1-9411-000	-	2	SCREW, CROSS RECESS PH	
	CB1-4204-000	D	1	WING,PALM	パームウィング
	CF1-2152-000	D	1	TERMINAL,PC	PCターミナル
	CG1-3023-000	D	1	SUPERIMPOSE ASS'Y	スーパーインポーズユニット
	CH2-5070-000	E	1	SWITCH,CF	隠れスイッチゴム
	CS2-6931-000	D	1	SPRING,COIL	コイルバネ
	X99-0630-000	-	1	SCREW, CROSS RECESS PH	
	XA4-4200-457	-	1	SCREW, CROSS RECESS PH	
	XA4-6170-409	-	2	SCREW, CROSS RECESS PH	
	XA4-8200-407	-	2	SCREW, CROSS RECESS PH	
	XA4-8200-359	-	1	SCREW, CROSS RECESS PH	
	XA4-9170-459	-	1	SCREW, CROSS RECESS PH	
	XA4-9170-709	-	2	SCREW, CROSS RECESS PH	
	XA4-9200-557	-	1	SCREW, CROSS RECESS PH	
	XA4-9200-609	-	1	SCREW, CROSS RECESS PH	

CANON EOS-1[N] RS



CS2-5003-000 detail

Strength	SIZE
420g	(010)
340g	(020)
300g	(030)

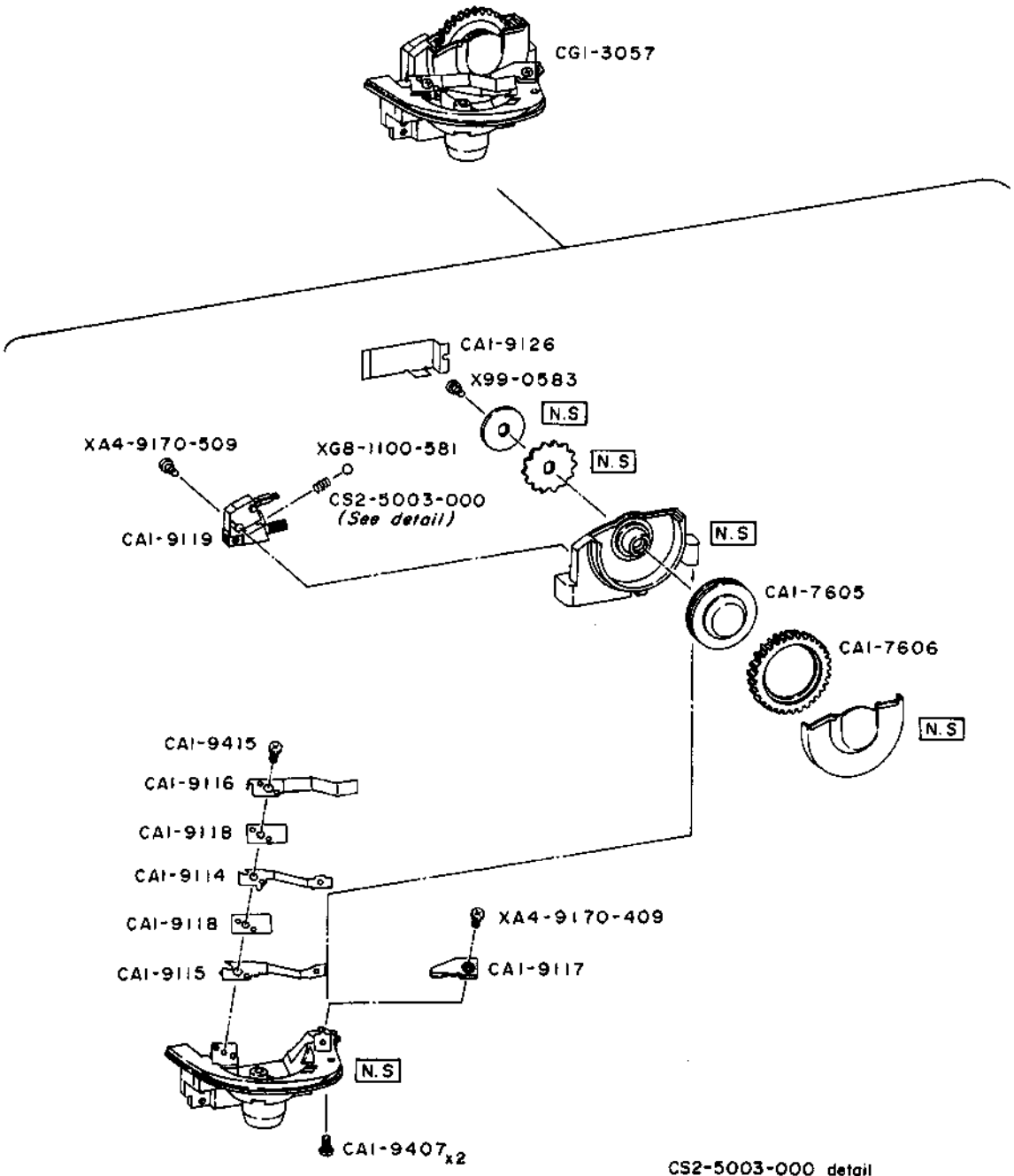
PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-5074-000	E	1	SCREW,STOPPER	ストッパーIビス
	CA1-5826-000	D	1	SHAFT,HINGE	ヒンジ軸
	CA1-6522-000	E	1	CLAW,BACK COVER	背蓋爪
	CA1-6523-060	E	1	HOLDER,FILM MAGAZINE	フイルムマガジンホルダー
	CA1-6525-000	E	1	PLATE,SPRING	スプリング板
	CA1-6527-000	D	1	SHIELD,LIGHT	モルトプレーン
	CA1-9197-000	D	1	FILM WINDOW	フィルム窓
	CA1-9200-000	C	1	GRIP,BACK COVER	背蓋グリップ
	CA1-9201-000	C	1	COVERING,BACK COVER	背蓋カバー
	CA1-9203-000	D	4	PIN	NOB 信号ピン
	CA1-9204-000	D	2	PIN	NOB GNDピン
	CA1-9205-000	D	1	CONTACT,SIGNAL	信号接片
	CA1-9207-000	E	1	CONTACT,DIAL	NOB ダイアル接片
	CA1-9208-000	D	1	DIAL,REAR INPUT	NOB ダイアル
	CA1-9209-000	D	1	CAM,REAR INPUT DIAL	LSWレバー
	CA1-9210-000	E	1	CONTACT,DIAL LOCK SWITCH	LSW接片
	CA1-9331-000	E	1	WASHER	位置決めワッシャー
	CA1-9332-000	D	1	TAPE,DOUBLE SIDED	両面テープ
	CF1-0423-001	D	1	PLATE,PRESSURE	圧着板
	CG1-0512-000	D	1	NDB FLEX ASSY	NDBフレキユニット
	CG1-3061-000	D	1	BACK COVER UNIT	背蓋ユニット
	CS1-5696-000	D	1	SPRING,COIL	コイルバネ
	CS2-5003-000(XXX)	D	1	SPRING,COIL	コイルバネ
	CY1-1340-000	E	1	COVER,BACK(DIAL)	NDB内蓋ユニット
	X99-0467-000	-	3	SCREW, CROSS RECESS PH	
	X99-0506-000	-	1	SCREW, CROSS RECESS PH	
	X99-0573-000	-	3	SCREW, CROSS RECESS PH	
	X99-0580-000	-	3	SCREW, CROSS RECESS PH	
	X99-0582-000	-	3	SCREW, CROSS RECESS PH	
	X99-0583-000	-	2	SCREW, CROSS RECESS PH	
	X99-0624-000	-	1	SCREW, CROSS RECESS PH	
	XG8-1100-581	-	1	BALL,STTEL	

REF. NO. C12-8311

CANON EOS-1[N] RS



CS2-5003-000 detail

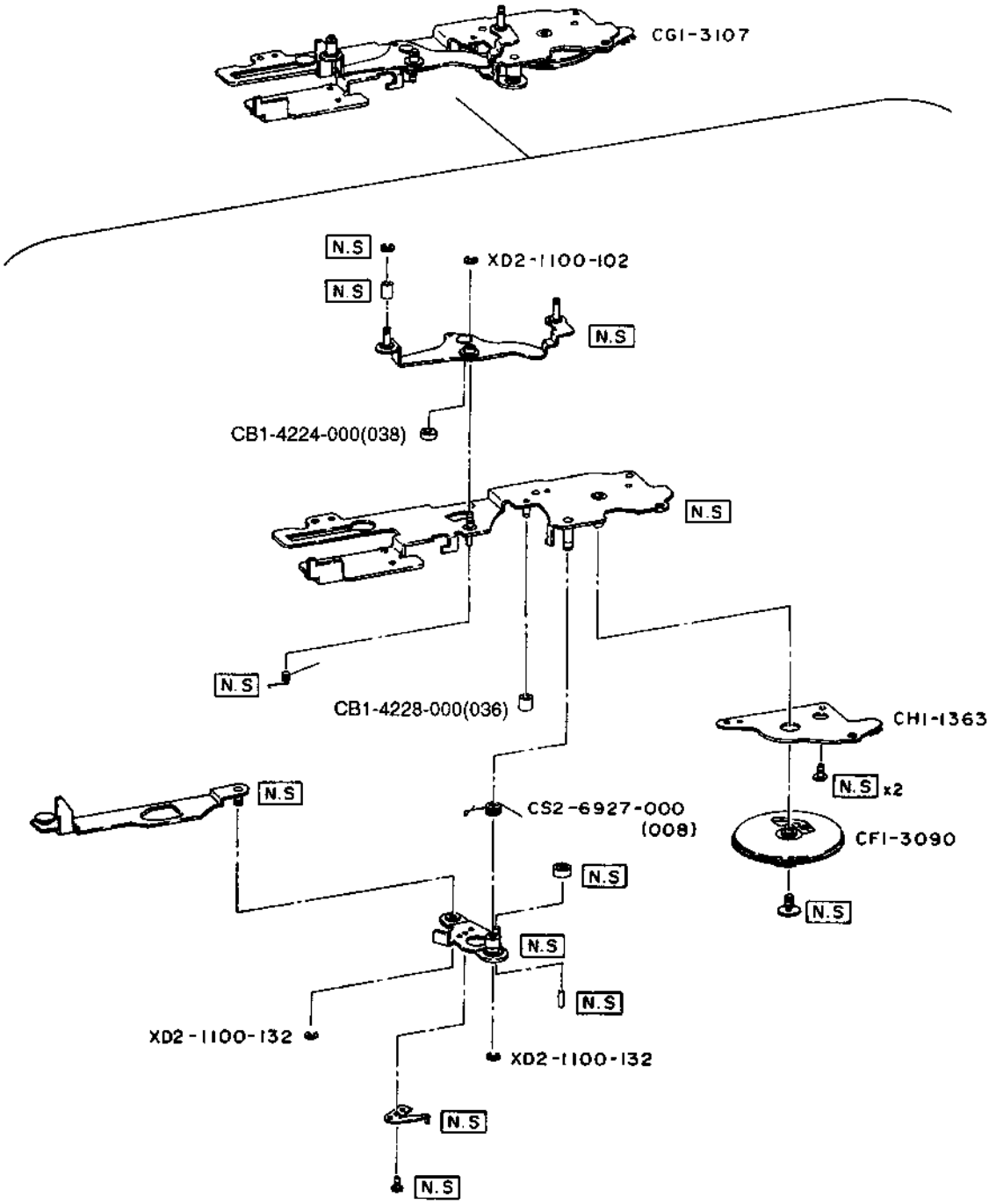
Strength	SIZE
420g	(010)
340g	(020)
300g	(030)

PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-7605-000	E	1	DIAL,MODE CHANGE	モード変換ダイアル
	CA1-7606-000	D	1	RING,DIAL	ダイヤルリング
	CA1-9114-000	D	1	CONTACT,RELEASE SWITCH	レリーズ接片 SW1
	CA1-9115-000	D	1	CONTACT,RELEASE SWITCH	レリーズ接片 SW2
	CA1-9116-000	D	1	CONTACT,RELEASE GROUND	レリーズGND接片
	CA1-9117-000	E	1	PLATE,RELEASE STOPPER	レリーズ規制板
	CA1-9118-000	D	2	SPACER,CONTACT	接片スペーサー
	CA1-9119-000	E	1	CONTACT,DIAL	ダイアル接片
	CA1-9126-000	D	1	COVER,DIAL CONTACT	ダイアル接片カバー
	CA1-9407-000	-	2	SCREW, CROSS RECESS PH	
	CA1-9415-000	-	1	SCREW, CROSS RECESS PH	
	CG1-3057-000	D	1	DIAL UNIT	ダイヤルユニット
	CS2-5003-000(XXX)	D	1	SPRING,COIL	コイルバネ
	X99-0583-000	-	1	SCREW, CROSS RECESS PH	
	XA4-9170-409	-	1	SCREW, CROSS RECESS PH	
	XA4-9170-509	-	1	SCREW, CROSS RECESS PH	
	XG8-1100-581	-	1	BALL,STTEL	

CANON EOS-1[N] RS

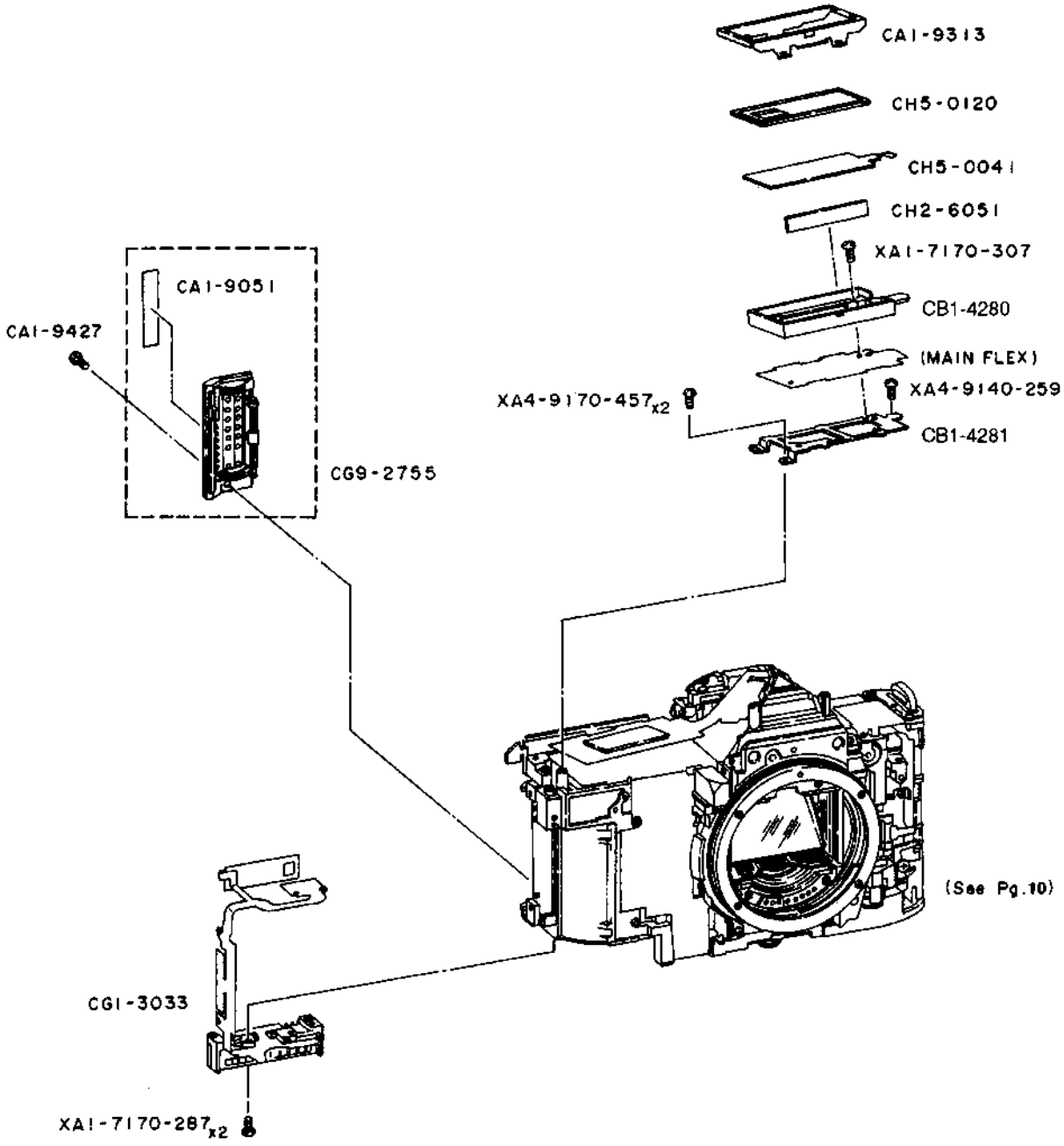


PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
*	CB1-4224-000(038)	D	1	STOPPER,RUBBER	ストッパー
*	CB1-4228-000(036)	D	1	STOPPER,RUBBER	ストッパー
*	CF1-3090-000	E	1	CAM GEAR UNIT	カムギアユニット
*	CG1-3107-000	E	1	CHARGE UNIT	チャージユニット
*	CH1-1363-000	D	1	PCB,COUNTER PULSE	チャージ基板
	XD2-1100-102	-	3	E RING	Eリング
	XD2-1100-132	-	2	E RING	Eリング

CANON EOS-1N RS

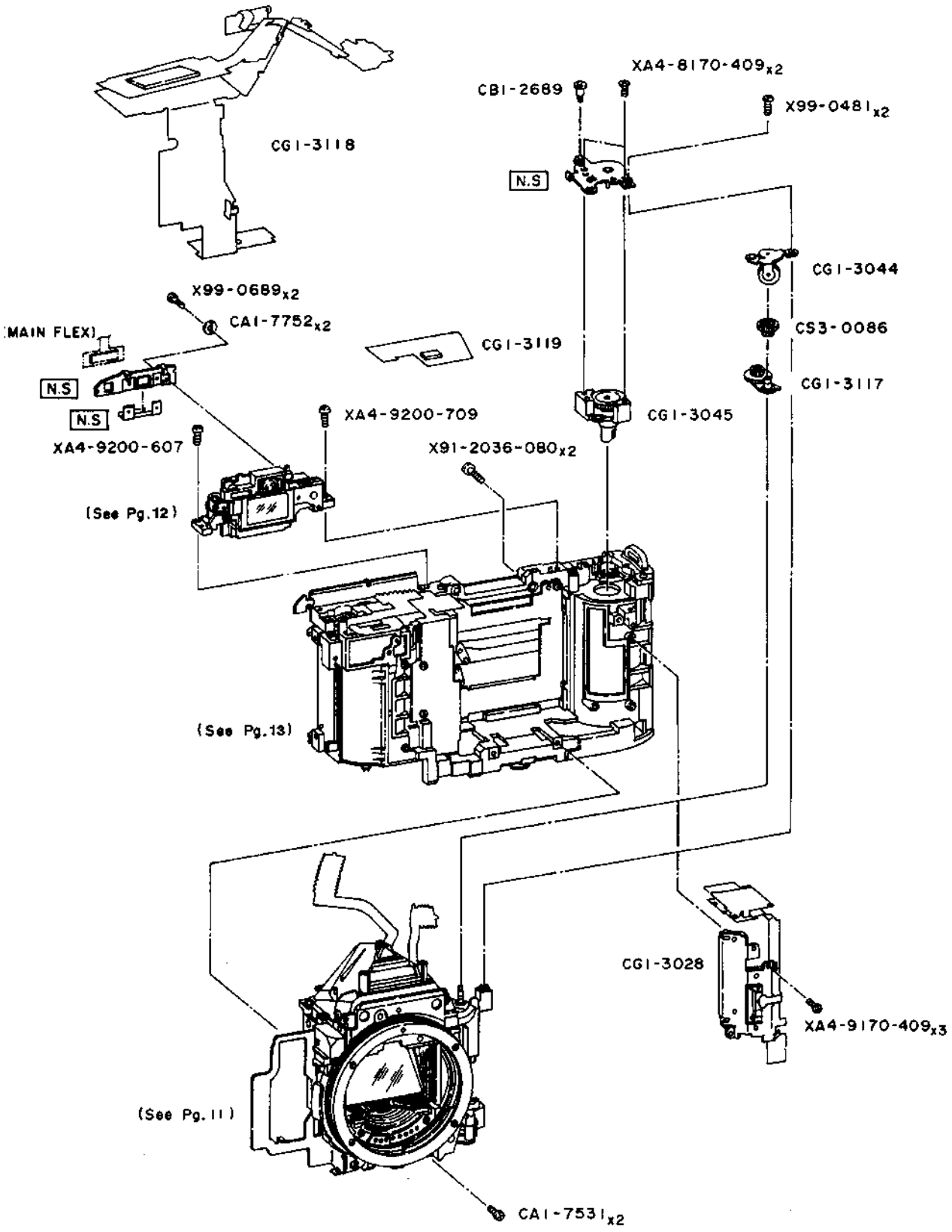


PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-9051-000	E	1	LABEL,FILM LOADING	フィルムセットシール
	CA1-9313-000	E	1	FRAME,LCD	LCD枠
	CA1-9427-000	-	1	SCREW, CROSS RECESS PH	
*	CB1-4280-000	E	1	CASE, LCD	OLCケース
*	CB1-4281-000	E	1	BASE, LCD	OLCベース
	CG1-3033-000	D	1	SYSTEM CONNETOR ASS'Y	システムコネクターユニット
	CG9-2755-000	D	1	ROLLER HOLDER UNIT	ローラーホルダーユニット
	CH2-6051-000	E	1	CONNECTOR,ELASTIC	コネクター
	CH5-0041-000	E	1	ELECTRO LUMINESCENCE EL	
	CH5-0120-000	D	1	LCD,EXTERNAL	
	XA1-7170-287	-	2	SCREW, CROSS RECESS PH	
	XA1-7170-307	-	1	SCREW, CROSS RECESS PH	
	XA4-9140-259	-	1	SCREW, CROSS RECESS PH	
	XA4-9170-457	-	2	SCREW, CROSS RECESS PH	

CANON EOS-1N RS

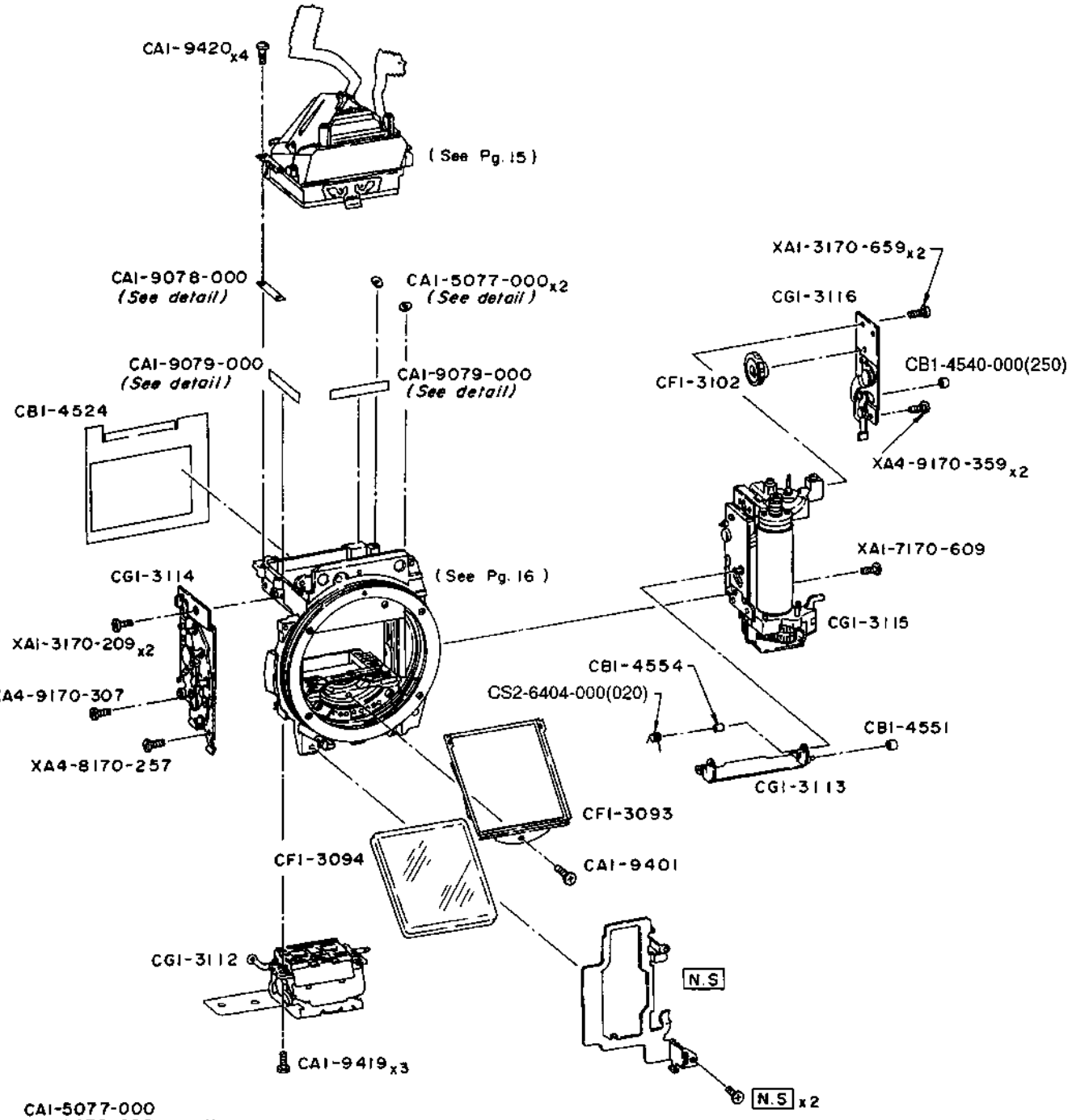


PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-7531-000	-	2	SCREW, CROSS RECESS PH	
	CA1-7752-000	E	2	WASHER,WAVE	測光ワッシャー
	CB1-2689-000	-	1	SCREW, CROSS RECESS PH	
	CG1-3028-000	D	1	DX CONTACT ASS'Y	DX接片ユニット
	CG1-3044-000	D	1	REWIND WORM GEAR UNIT	巻き戻し伝達ギアユニット
	CG1-3045-000	D	1	FORK UNIT	フォークユニット
*	CG1-3117-000	D	1	REWIND PLANETARY GEAR UNIT	遊星ギアユニット
*	CG1-3118-000	D	1	MAIN FLEX ASS'Y	メインフレキユニット
*	CG1-3119-000	D	1	MOTOR1 FLEX ASS'Y	M1フレキユニット
*	CS3-0086-000	D	1	GEAR,REWIND SUN	巻き戻し太陽ギア
	X91-2036-080	-	2	SCREW, CROSS RECESS PH	
	X99-0481-000		2	SCREW, CROSS RECESS PH	
	X99-0689-000	-	2	SCREW, CROSS RECESS PH	
	XA4-8170-409	-	2	SCREW, CROSS RECESS PH	
	XA4-9170-409	-	3	SCREW, CROSS RECESS PH	
	XA4-9200-607	-	1	SCREW, CROSS RECESS PH	
	XA4-9200-709	-	1	SCREW, CROSS RECESS PH	

CANON EOS-1N RS



CAI-5077-000
CAI-9078-000 detail

A	SIZE
0.03 mm	(003)
0.05 mm	(005)
0.10 mm	(010)
0.20 mm	(020)
0.30 mm	(030)
0.40 mm	(040)
0.60 mm	(060)

CAI-9079-000 detail

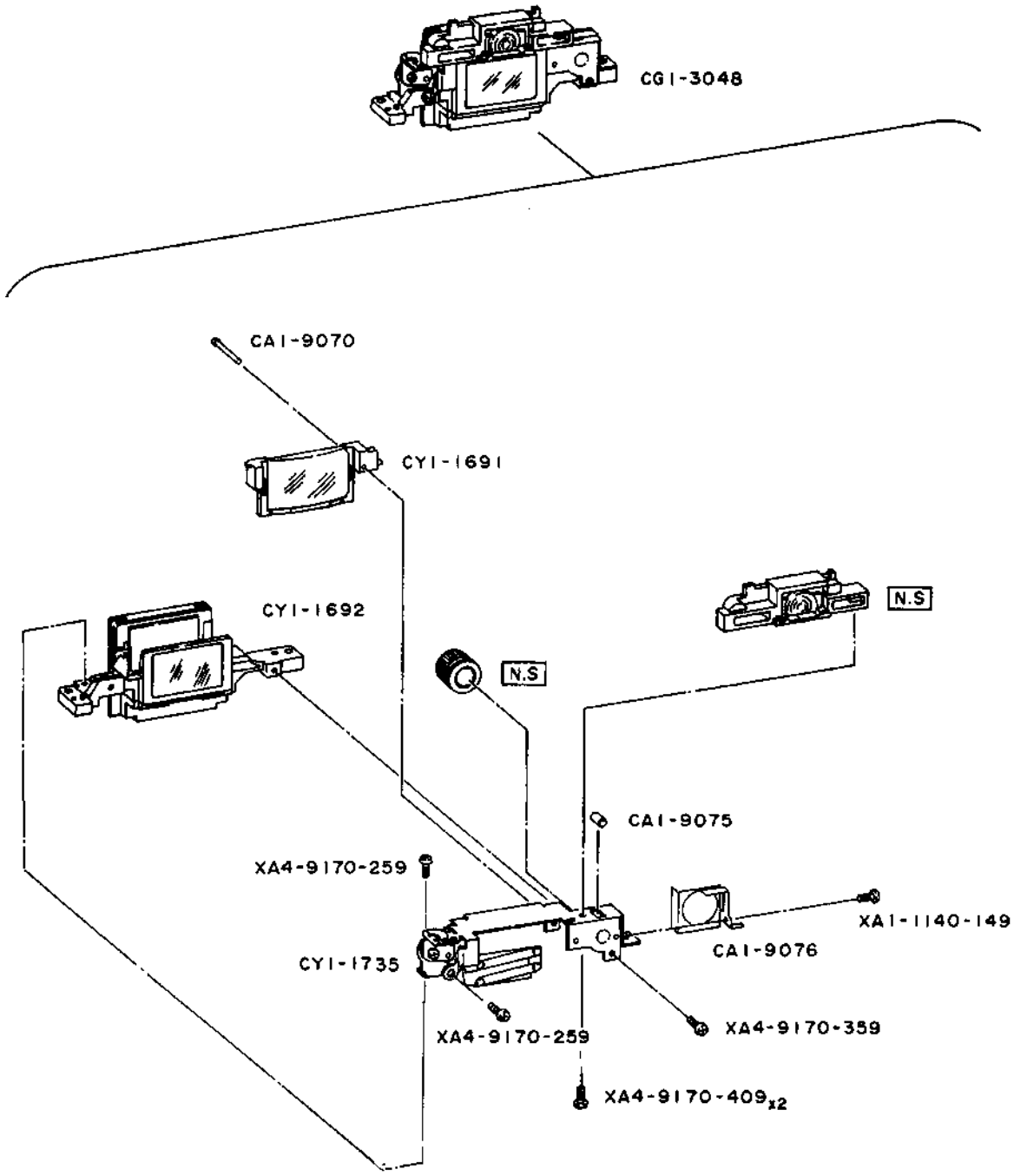
A	SIZE
0.05 mm	(005)
0.10 mm	(010)
0.20 mm	(020)
0.30 mm	(030)
0.40 mm	(040)
0.60 mm	(060)

PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-5077-000(XXX)	E	1	WASHER,FINDER FOCUSING	ファインダーフォーカシングワッシャー
	CA1-9078-000(XXX)	E	1	SHIM,FINDER FOCUSING	ピント調整板
	CA1-9079-000(XXX)	E	2	PLATE,PARALLAX ADJUSTING	視野調整板
	CA1-9401-000	-	1	SCREW, CROSS RECESS PH	
	CA1-9419-000	-	3	SCREW, CROSS RECESS PH	
	CA1-9420-000	-	4	SCREW, CROSS RECESS PH	
*	CB1-4524-000	E	1	CURTAIN,LIGHT SHIELD	ミラーボックス遮光幕
*	CB1-4540-000(250)	D	1	COLLAR, SUB-MIRROR MECH.	サブミラー駆動コロ
*	CB1-4551-000	D	1	COLLAR, SUB-MIRROR	サブミラー駆動コロ
*	CB1-4554-000	D	1	COLLAR, SUB-MIRROR DRIVE	サブミラー駆動コロ
*	CF1-3093-000	D	1	PELLICLE MIRROR FRAME UNIT	ペリクルミラー枠ユニット
*	CF1-3094-000	D	1	PELLICLE MIRROR UNIT	ペリクルミラーユニット
*	CF1-3102-000	D	1	MIRROR CAM GEAR UNIT	ミラーカムギアユニット
*	CG1-3112-000	D	1	AF UNIT	AFユニット
*	CG1-3113-000	D	1	SUB-MIRROR UNIT	サブミラーユニット
*	CG1-3114-000	D	1	SHUTTER DRIVE UNIT	シャッター駆動ユニット
*	CG1-3115-000	D	1	MOTOR 2 UNIT	M2 モータユニット
*	CG1-3116-000	D	1	SUB-MIRROR MECHANISM UNIT	サブミラーメカユニット
*	CS2-6404-000(020)	D	1	SPRING, SUB-MIRROR DRIVE	サブミラー駆動スプリング
	XA1-3170-209	-	2	SCREW, CROSS RECESS PH	
*	XA1-3170-659	-	2	SCREW, CROSS RECESS PH	
	XA1-7170-609	-	1	SCREW, CROSS RECESS PH	
	XA4-8170-257	-	1	SCREW, CROSS RECESS PH	
	XA4-9170-307	-	1	SCREW, CROSS RECESS PH	
	XA4-9170-359	-	2	SCREW, CROSS RECESS PH	

CANON EOS-1[N] RS

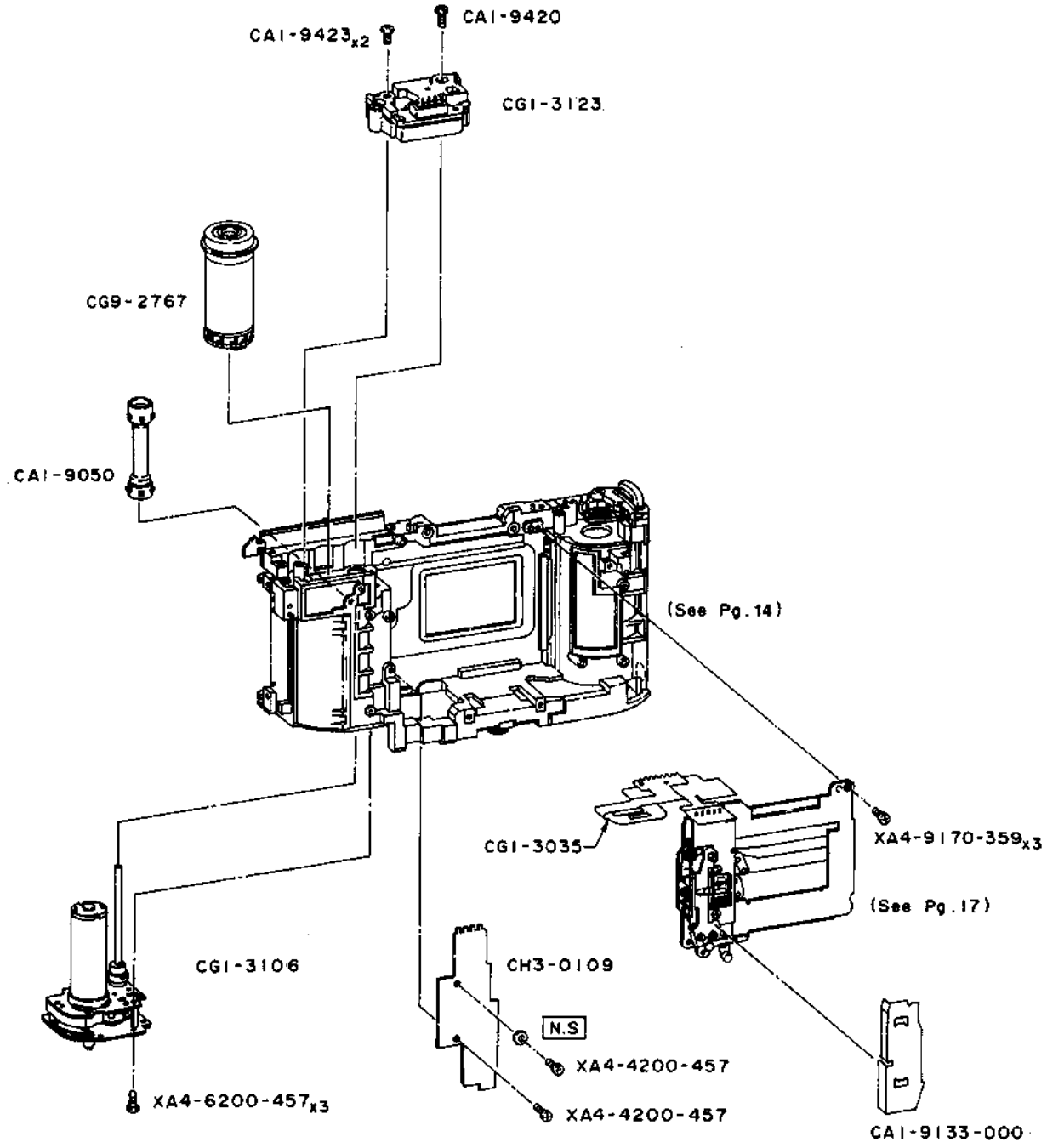


PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-9070-000	D	1	SHAFT,FRAME GUIDE	移動枠ガイド軸
	CA1-9075-000	E	1	PIN,EYEPIECE DETENT	視度調クリックピン
	CA1-9076-000	E	1	SPRING,EYEPIECE DETENT	視度調クリックバネ
	CG1-3048-000	D	1	EYEPIECE ADJUSTMENT UNIT	視度調ユニット
	CY1-1691-000	D	1	EYEPIECE LENS ADJUSTING UNIT	移動枠ユニット
	CY1-1735-000	D	1	EYEPIECE SHUTTER UNIT	アイピースシャッターユニット
	CY1-1692-000	C	1	EYEPIECE UNIT	アイピースユニット
	XA1-1140-149	-	1	SCREW, CROSS RECESS PH	
	XA4-9170-259	-	2	SCREW, CROSS RECESS PH	
	XA4-9170-359	-	1	SCREW, CROSS RECESS PH	
	XA4-9170-409	-	2	SCREW, CROSS RECESS PH	

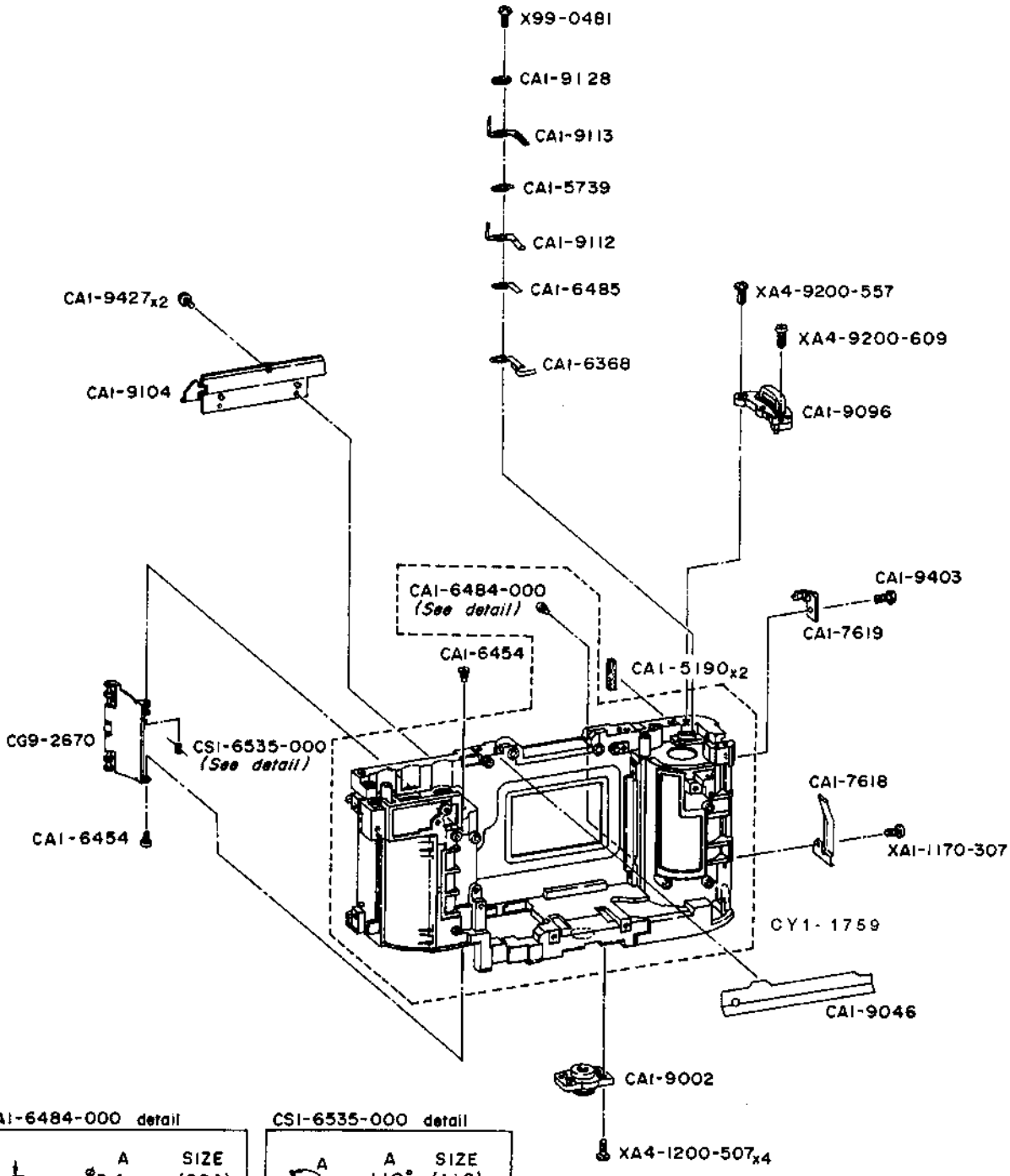
CANON EOS-IN RS



PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-9050-000	C	1	SPROKET	スプロケット
	CA1-9133-000	E	1	SHEET,DUST	防塵カバー
	CA1-9420-000	-	1	SCREW, CROSS RECESS PH	
	CA1-9423-000	-	2	SCREW, CROSS RECESS PH	
*	CG1-3106-000	E	1	FILM ADVANCE UNIT	給送ユニット
*	CG1-3123-000	D	1	SIGNAL UNIT	信号ユニット
	CG1-3035-000	E	1	INTERCONNECTING FLEX	連結フレキ
	CG9-2767-000	D	1	SPOOL UNIT	スプールユニット
	CH3-0109-000	D	1	DC/DC CONVERTER1 ASS'Y	DC/DCコンバーター 1
	XA4-4200-457	-	2	SCREW, CROSS RECESS PH	
	XA4-6200-457	-	3	SCREW, CROSS RECESS PH	
	XA4-9170-359	-	3	SCREW, CROSS RECESS PH	



CA1-6484-000 detail

A	SIZE
ø2.4 mm	(024)
ø2.5 mm	(025)
ø2.6 mm	(026)

CS1-6535-000 detail

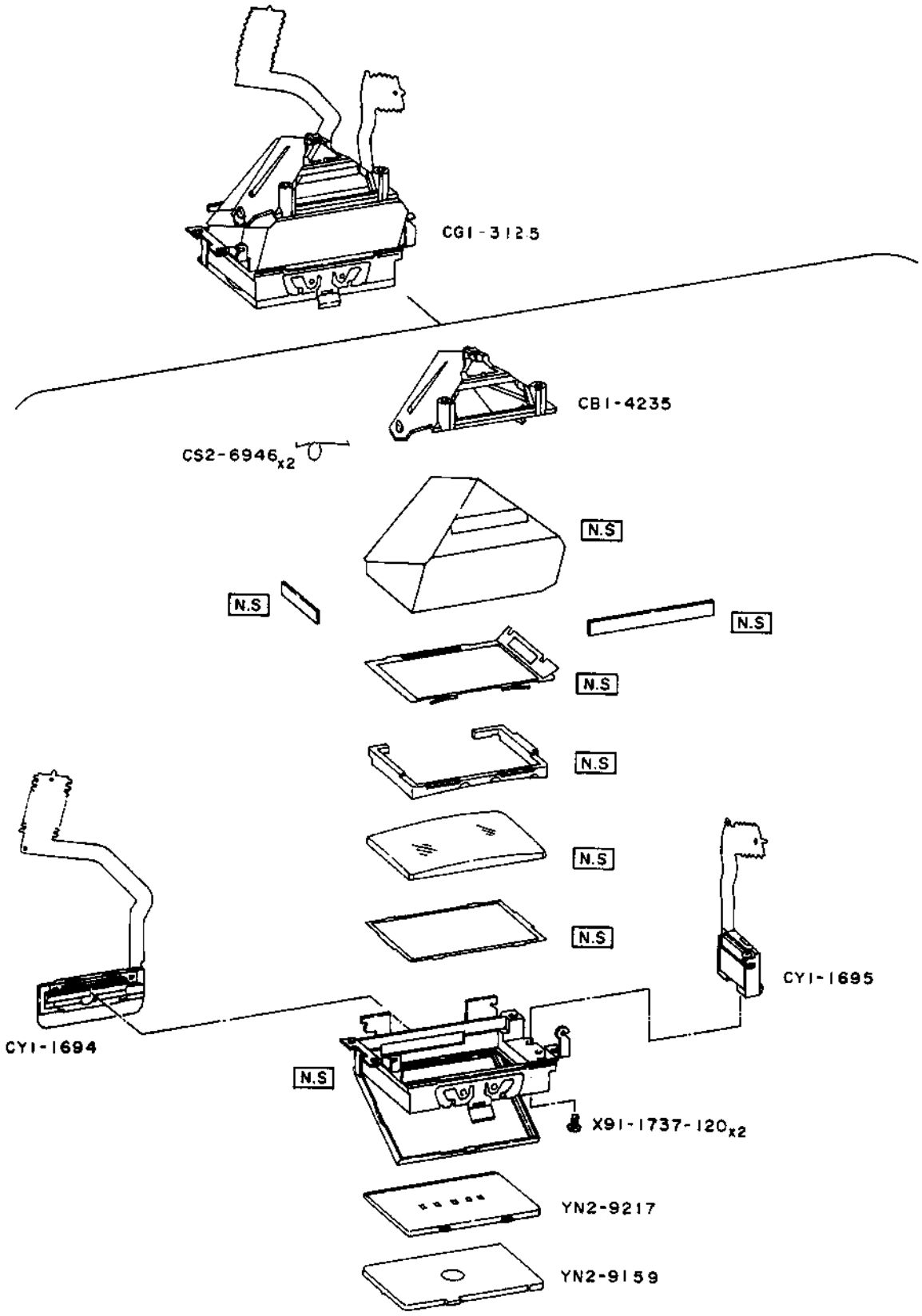
A	SIZE
110°	(110)
115°	(115)
120°	(120)

PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-5190-000	E	2	SHIELD,LIGHT	モルトプレーン
	CA1-5739-000	D	1	INSULATOR	絶縁板
	CA1-6368-000	E	1	PLATE,SAFETY LOCK	安全ロック板
	CA1-6454-000	-	2	SCREW, AL COVER SHAFT	ALカバー軸ビス
	CA1-6484-000(XXX)	E	1	SHAFT,FILM GUODE	フィルムガイド軸
	CA1-6485-000	E	1	INSULATOR	絶縁板
	CA1-7618-000	E	1	SPRING,PLATE	板スプリング
	CA1-7619-000	E	1	HOLDER,CASSETTE	カセットホルダー
	CA1-9002-000	D	1	SOCKET,TRIPOD	三脚座
	CA1-9046-000	E	1	SHIELD,LIGHT	遮光板
	CA1-9096-000	D	1	HOLDER,STRAP(LEFT)	耳環（左）
	CA1-9104-000	D	1	PANEL,BLIND	スイッチ受け
	CA1-9112-000	D	1	CONTACT,BACK COVER SWITCHI	背蓋スイッチ接片
	CA1-9113-000	D	1	CONTACT,BACK COVER SW GND	背蓋SWG接片
	CA1-9128-000	D	1	SPACER	スペーサー
	CA1-9403-000	-	1	SCREW, CROSS RECESS PH	
	CA1-9427-000	-	2	SCREW, CROSS RECESS PH	
	CG9-2670-000	D	1	AL COVER ASS'Y	ALカバーユニット
	CS1-6535-000(XXX)	E	1	SPRING	ALカバーバネ
*	CY1-1759-000	E	1	BODY ASS'Y	本体
	X99-0481-000	-	1	SCREW, CROSS RECESS PH	
	XA1-1170-307	-	1	SCREW, CROSS RECESS PH	
	XA4-1200-507	-	4	SCREW, CROSS RECESS PH	
	XA4-9200-557	-	1	SCREW, CROSS RECESS PH	
	XA4-9200-609	-	1	SCREW, CROSS RECESS PH	

CANON EOS-1N RS

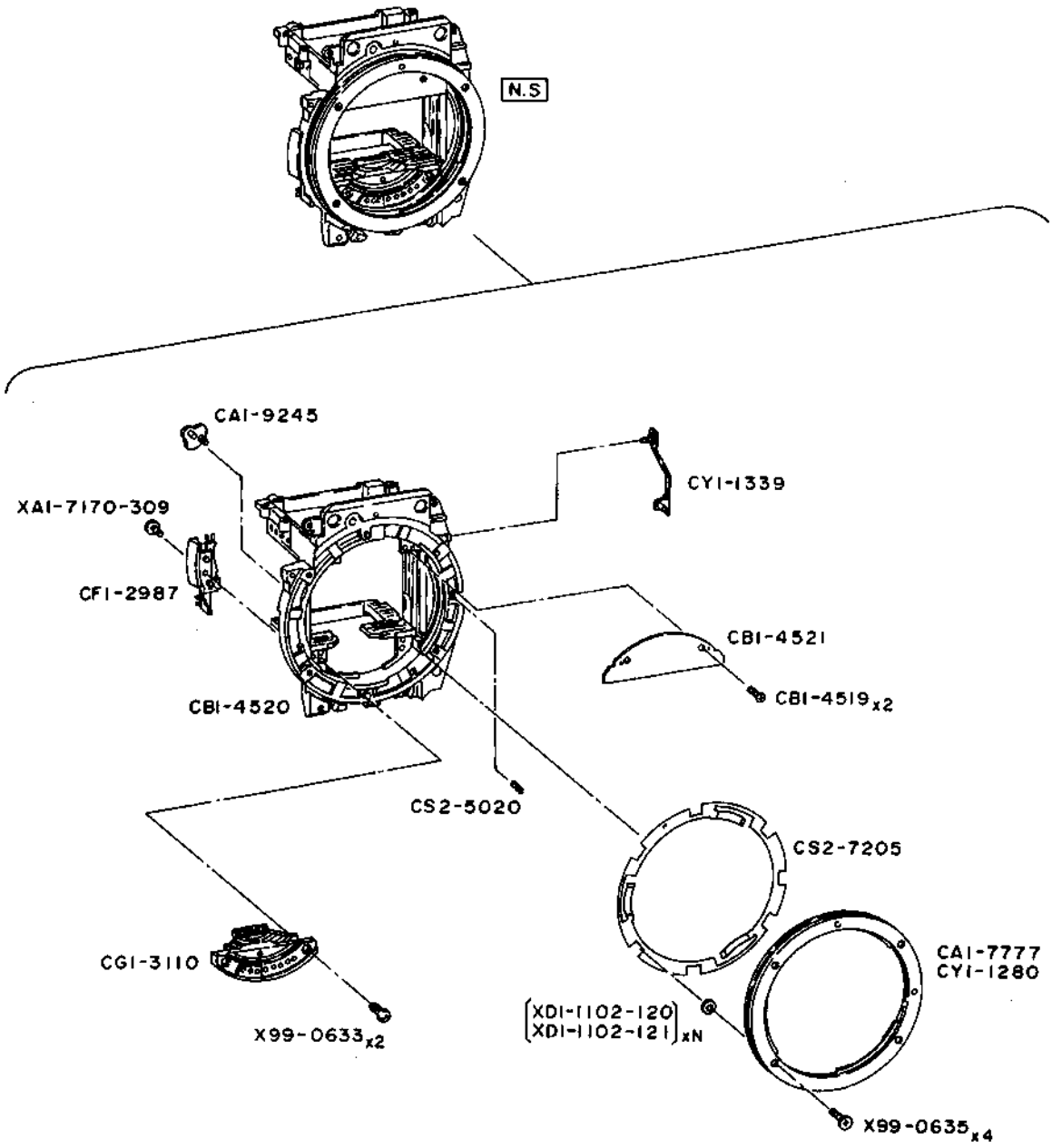


PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
*	CG1-3125-000	C	1	PENTAPRISM UNIT	ペンタプリズムユニット
	CS2-6946-000	D	2	SPRING	ペンタ押バネえ
	CY1-1694-000	D	1	LCD UNIT (HORIZONTAL)	HLCユニット
	CY1-1695-000	D	1	LCD UNIT(VERTICAL)	VLCユニット
	X91-1737-120	-	2	SCREW, CROSS RECESS PH	
	YN2-9217-000	C	1	MASK,AF FRAME	AFフレーム板
*	YN2-9159-000	C	1	SCREEN,FOCUSING	ピント板

CANON EOS-1N RS



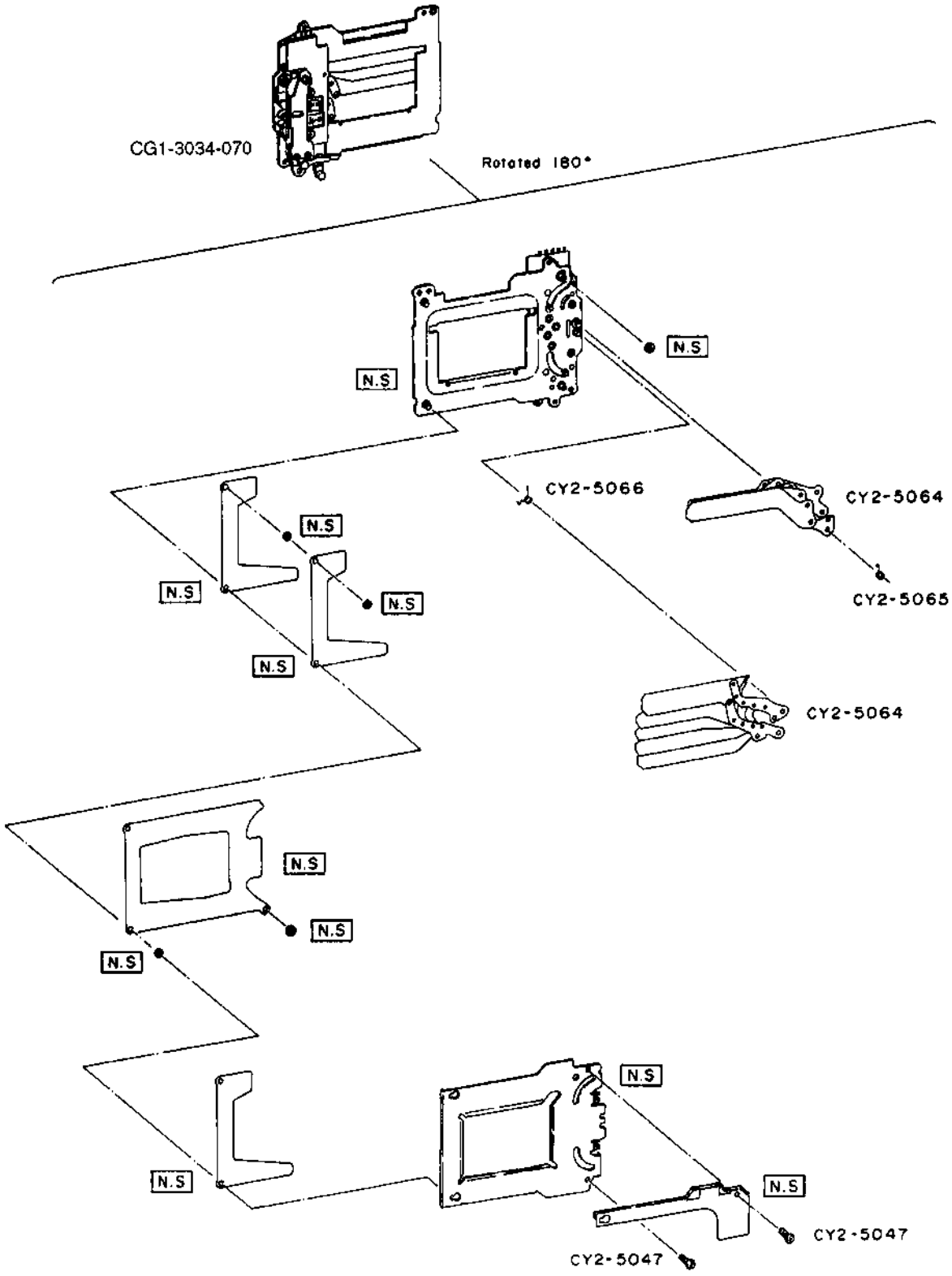
PARTS LIST

REF.NO. C12-8311

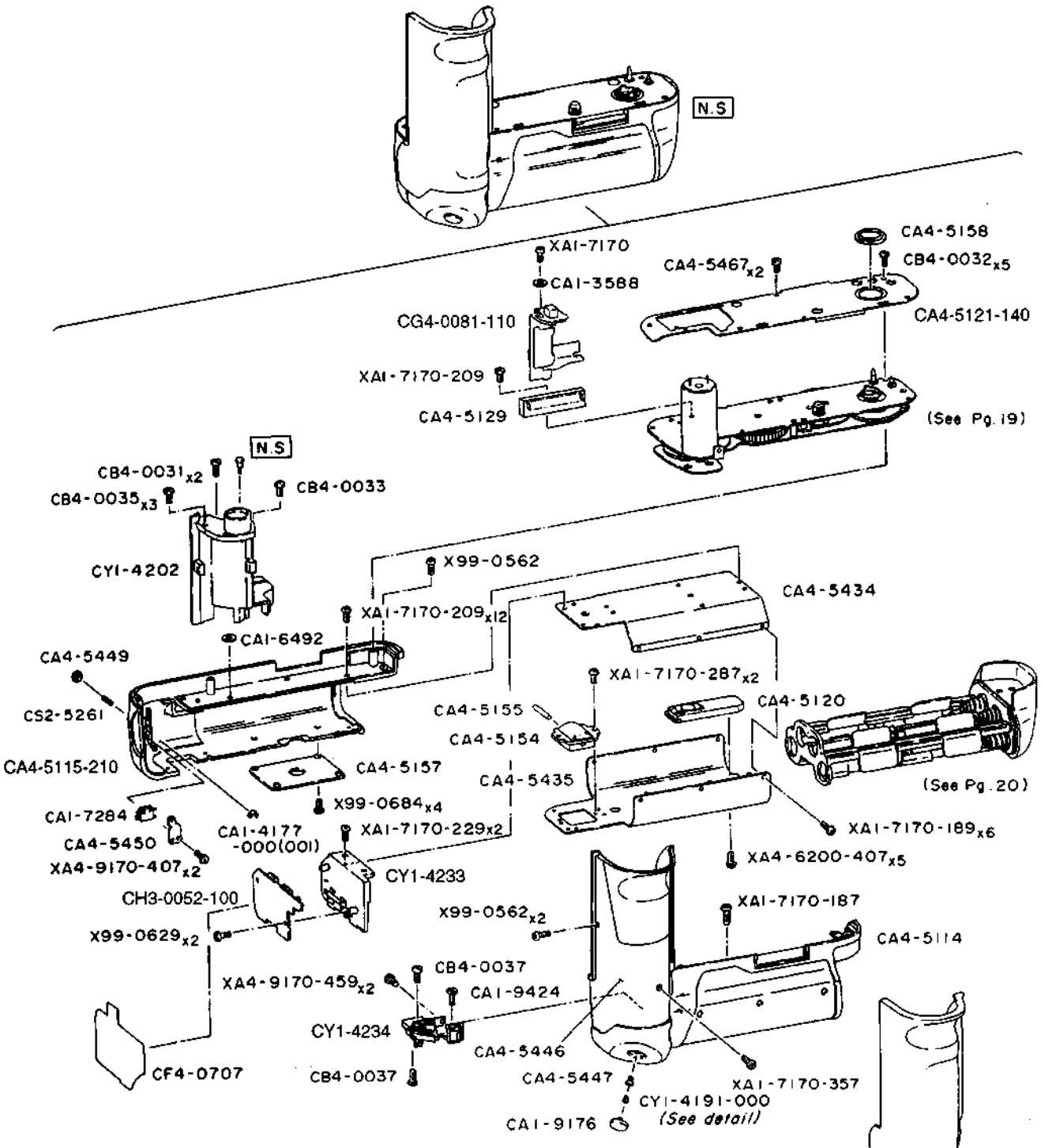
NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-7777-000	C	1	MOUNT,BODY	ボデーマウント
	CA1-9245-000	E	1	LEVER, SENSOR	検知レバー
*	CB1-4519-000	-	2	SCREW, CROSS RECESS PH	
*	CB1-4520-000	D	1	BOX,MIRROR	前板
*	CB1-4521-000	D	1	PLATE,LIGHT SHIELD	前板遮光板
	CF1-2987-000	D	1	SWITCH, LENS	レンズスイッチ
*	CG1-3110-000	E	1	MOUNT CONTACT ASS'Y	接点座ユニット
	CS2-5020-000	E	1	SPRING,COIL	コイルバネ
*	CS2-7205-000	D	1	SPRING,MOUNT	マウントバネ
	CY1-1280-000	E	1	MOUNT,BODY	ボデーマウント
	CY1-1339-000	E	1	LOCK PIN UNIT	ロックピンユニット
	X99-0633-000	-	2	SCREW, CROSS RECESS PH	
	X99-0635-000	-	4	SCREW, CROSS RECESS PH	
	XA1-7170-309	-	1	SCREW, CROSS RECESS PH	
	XD1-1102-120	-	1	WASHER	
	XD1-1102-121	-	1	SHIM,WASHER	

REF. NO. C12-8311

CANON EOS-IN RS



CANON EOS-IN RS



CY1-4191-000 detail ⊛STANDARD

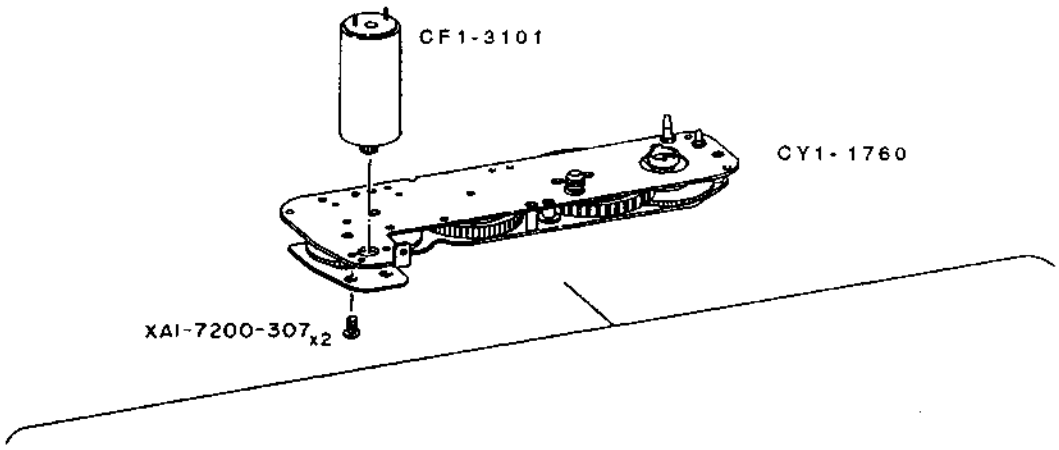
A.B	A	B	SIZE	A	B	SIZE	A	B	SIZE
	* 1.0mm	1.2mm	(001)	1.5mm	1.2mm	(003)	2.0mm	1.2mm	(005)
		1.4mm	(002)		1.4mm	(004)		1.4mm	(006)

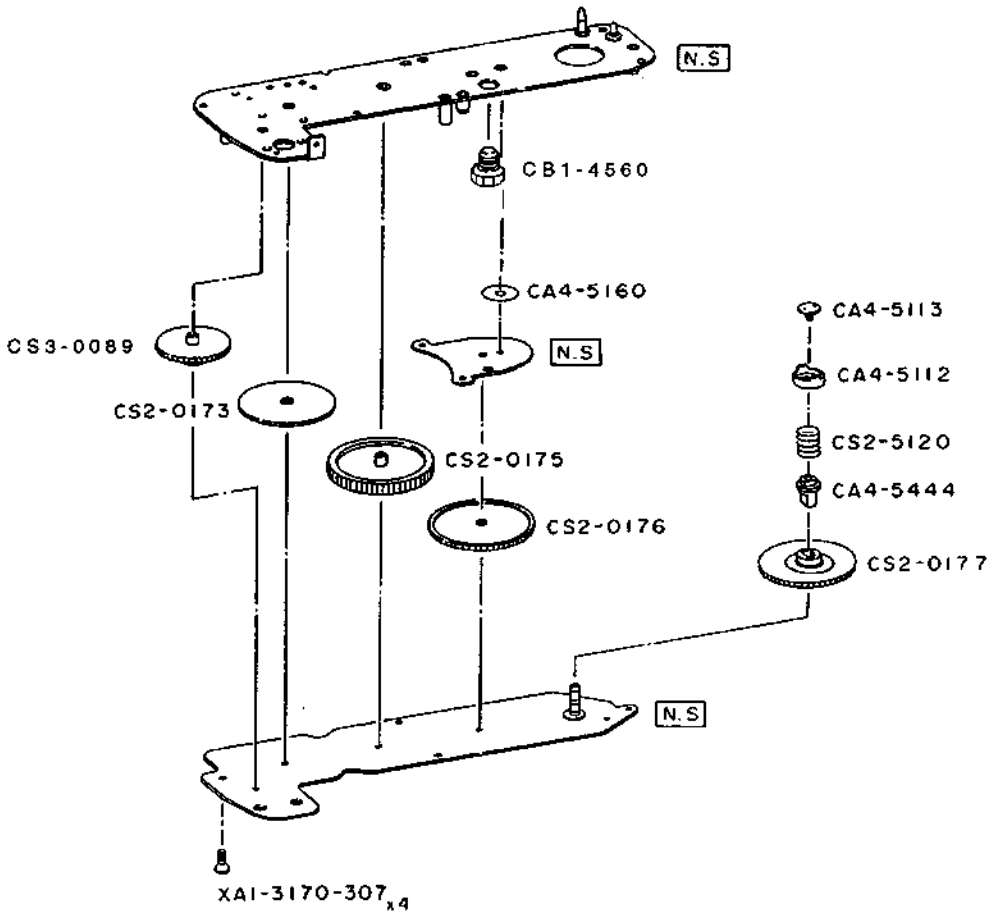
PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA1-3588-000	D	1	WASHER	ワッシャー
	CA1-4177-000(001)	D	1	RING,C	Cリング
	CA1-6492-000	D	1	WASHER	ワッシャー
	CA1-7284-000	D	1	SWITCH,MD AE LOCK	AEロックスイッチ
	CA1-9176-000	C	1	BUTTON,RELEASE	レリーズボタン
	CA1-9424-000	-	1	SCREW,CROSS-RECESS,PH	
	CA4-5114-000	D	1	CASE,A MD	MDケースA
	CA4-5115-210	D	1	CASE,B MD	MDケースB
	CA4-5118-000	C	1	COVERING	MDグリップゴム
	CA4-5120-000	D	1	TRIPOD,MD	MD三脚
	CA4-5121-140	C	1	PANEL,MD	MDパネル
	CA4-5122-000	C	1	COVERING	ケースゴム
	CA4-5129-000	D	1	CONTACT ASS'Y	コンタクト接片
	CA4-5154-000	D	1	HOLDER,STRAP	ストラップホルダー
	CA4-5155-000	D	1	SHAFT,STRAP HOLDER	ストラップホルダー軸
	CA4-5157-000	D	1	BASE,TRIPOD	三脚座
	CA4-5158-000	D	1	RING,WATER PROOF	防水リング
	CA4-5434-000	D	1	PLATE,REINFORCEMENT U	補強Uプレート
	CA4-5435-000	D	1	PLATE,REINFORCEMENT L	補強Lプレート
	CA4-5446-000	C	1	TAPE,DOUBLE SIDED	MD両面テープ
	CA4-5447-000	E	1	SHAFT,MD RELEASE	MDレリーズ軸
	CA4-5449-000	E	1	BUTTON,AE LOCK	AEロックボタン
	CA4-5450-000	E	1	HOLDER, AE LOCK	AEロック押さえ板
	CA4-5467-000	-	2	SCREW,CROSS-RECESS,PH	
	CB4-0031-000	-	2	SCREW,CROSS-RECESS,PH	
	CB4-0032-000	-	5	SETSCREW,SLOTTED	
	CB4-0033-000	-	1	SCREW,CROSS-RECESS,PH	
	CB4-0035-000	-	3	SCREW,CROSS-RECESS,PH	
	CB4-0037-000	-	2	SCREW,CROSS-RECESS,PH	
*	CF4-0707-000	D	1	FPC,SHIELD	シールド板
	CG4-0081-110	D	1	MD-FLEX UNIT	MDフレキユニット
	CH3-0052-100	E	1	DC/DC CONVERTER 2	DC/DC コンバーター2
	CS2-5261-000	D	1	SPRING,MD-AEL	MD-AELボタンバネ
	CY1-4191-000(XXX)	E	1	SHAFT,ADJUSTING	調整軸
	CY1-4202-000	E	1	GRIP COVER UNIT	グリップカバーユニット
	CY1-4233-000	E	1	RESET HOLDER UNIT	リセットホルダーユニット
	CY1-4234-000	E	1	SWITCH BASE UNIT	スイッチ地板ユニット
	X99-0562-000	-	3	SCREW, CROSS RECESS PH	
	X99-0629-000	-	2	SCREW, CROSS RECESS PH	
	X99-0684-000	-	4	SCREW, CROSS RECESS PH	
	XA1-7170-189	-	6	SCREW, CROSS RECESS PH	
	XA1-7170-207	-	1	SCREW, CROSS RECESS PH	
	XA1-7170-209	-	12	SCREW, CROSS RECESS PH	
	XA1-7170-229	-	13	SCREW, CROSS RECESS PH	
	XA1-7170-287	-	2	SCREW, CROSS RECESS PH	
	XA1-7170-357	-	1	SCREW, CROSS RECESS PH	
	XA4-6200-407	-	5	SCREW, CROSS RECESS PH	
	XA4-7170-187	-	1	SCREW, CROSS RECESS PH	
	XA4-9170-407	-	2	SCREW, CROSS RECESS PH	
	XA4-9170-459	-	2	SCREW, CROSS RECESS PH	

CANON EOS-I[N] RS



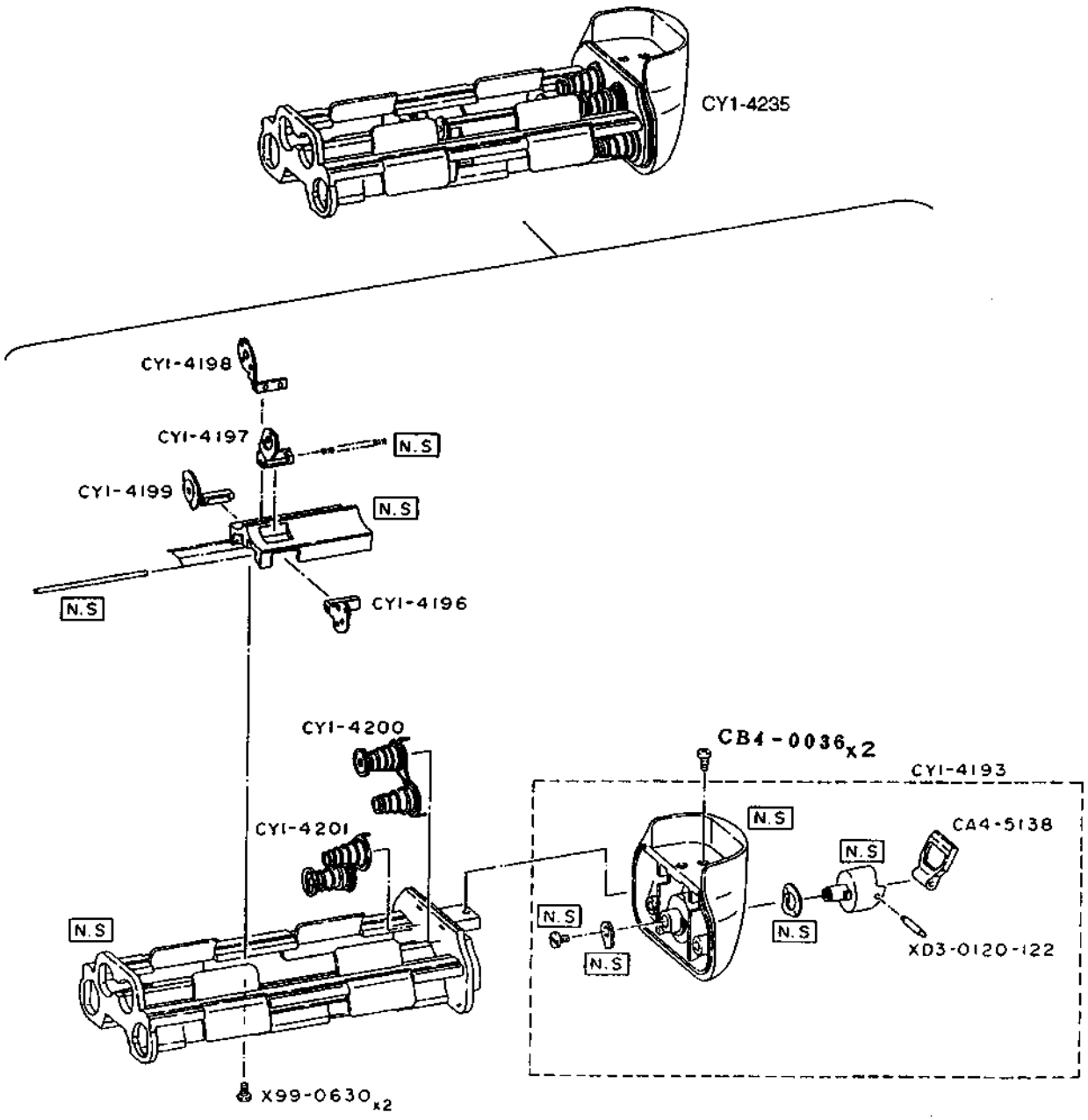


PARTS LIST

REF.NO. C12-8311

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA4-5112-000	D	1	COUPLER,MD	MDカプラー
	CA4-5113-000	D	1	SCREW,PIN FACE	カプラーカニ目ビス
	CA4-5160-000	D	1	WASHER	ワッシャー
	CA4-5444-000	D	1	SHAFT,COUPLER	カプラー駆動軸
	CB1-4560-000	D	1	SCREW,TRIPOD	三脚ネジ
*	CF1-3101-000	D	1	MOTOR UNIT	モーターユニット
	CS2-0173-000	E	1	GEAR,H	太陽ギアH
	CS2-0175-000	E	1	GEAR, A IDLER	アイドルギアA
	CS2-0176-000	E	1	GEAR B,IDLER	アイドルギアB
	CS2-0177-000	E	1	GEAR,COUPLER	カプラーギア
	CS2-5120-000	D	1	SPRING,COUPLER	カプラーバネ
*	CS3-0089-000	E	1	GEAR,SUN	太陽ギア
*	CY1-1760-000	D	1	CHARGE UNIT	チャージユニット
	XA1-3170-307	-	4	SCREW, CROSS RECESS PH	
	XA1-7200-307	-	2	SCREW, CROSS RECESS PH	

CANON EOS-1N RS



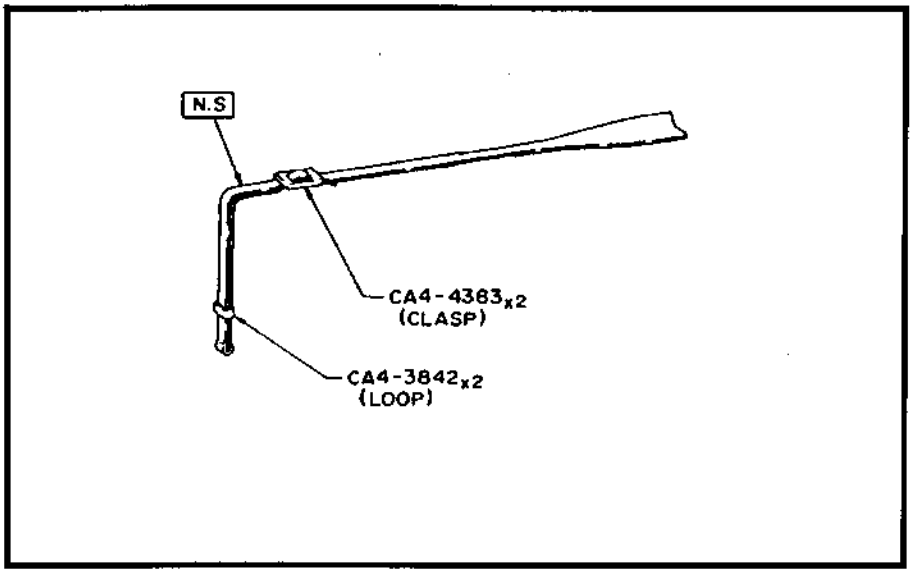
PARTS LIST

REF.NO. C12-8311

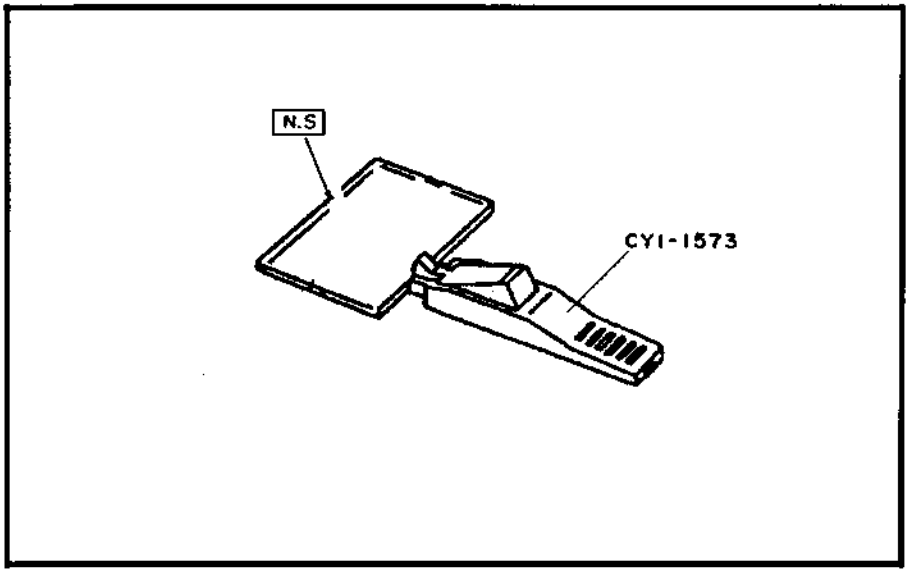
NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CA4-5138-000	D	1	KNOB,BATTERY MAGAZINE	電池マガジン開閉ツマミ
	CB4-0036-000	-	2	SCREW, CROSS RECESS PH	
	CY1-4193-000	C	1	BATTERY COVER UNIT	電池蓋ユニット
	CY1-4196-000	D	1	MIDDLE CONTACT UNIT A	中間接片Aユニット
	CY1-4197-000	D	1	MIDDLE CONTACT UNIT B	中間接片Bユニット
	CY1-4198-000	D	1	MIDDLE CONTACT UNIT C	中間接片Cユニット
	CY1-4199-000	D	1	MIDDLE CONTACT UNIT D	中間接片Dユニット
	CY1-4200-000	C	1	BATTERY CONTACT UNIT A	電池接片Aユニット
	CY1-4201-000	D	1	BATTERY CONTACT UNIT B	電池接片Bユニット
	CY1-4235-000	D	1	BATTERY HOLDER UNIT	電池ホルダーユニット
	X99-0630-000	-	2	SCREW, CROSS RECESS PH	
	XD3-0120-122	-	1	PIN, SPRING	

CANON Acc.

NECK STRAP L3



FOCUSING SCREEN EC-C



NECK STRAP L3

REF.NO. C56-1421-001

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	C56-1421-001	D	1	NECK STRAP L3	ストラップL3（アイピースカバー無し）
	CA4-3842-000	D	2	LOOP	環
	CA4-4383-000	D	2	CLASP	止め金

FOCUSING SCREEN EC-C

REF.NO. C51-9953

NEW	PARTS NO.	CLASS	QTY	DESCRIPTION	
	CY1-1573-000	D	1	TOOL,FOCUSING SCREEN	スクリーン取り外し工具

ELECTRIC PARTS LIST

REF.NO. C12-8311

NEW	SYMBOL	PARTS NO.	DESCRIPTION	REMARK
	BXTAL	WK2-0188-000	XTAL(32.76KHz)	DS-VT200
	FUSE	WD8-5050-000(200)	FUSE	JAA-5002-501
	LCD Dr.	CH4-0514-000	LCD DRIVER IC	SN28899
	MTDR1	CH4-0159-000	MOTOR DRIVER1	T8120
*	MTDR2	WA4-6332-000	MOTOR DRIVER2	MPC17A10SVM
	TMOS	CH4-0213-000	TMOS	SFX10
	XTAL	WK2-0188-000	XTAL(32.76KHz)	DS-VT200
		CH2-2777-000	FLAT TWIN LEADS	RED / WHITE
		CH2-2796-000	SHIELDED LEADS	BLACK / WHITE
		CH2-4173-000	FLAT TWIN LEADS	RED / WHITE
		CH2-4174-000	FLAT TWIN LEADS	RED / WHITE
		CH2-4176-000	SHIELDED LEADS	BLACK / WHITE
		Y11-3704-000	LEAD	PINK
		Y11-3706-000	LEAD	ORANGE
		Y11-3712-000	LEAD	PURPLE
		Y11-3901-000	LEAD	WHITE
		Y11-3902-000	LEAD	BLACK
		Y11-3903-000	LEAD	RED
		Y11-3904-000	LEAD	PINK
		Y11-3906-000	LEAD	ORANGE
		Y11-3907-000	LEAD	YELLOW
		Y11-3909-000	LEAD	GREEN
		Y11-3911-000	LEAD	BLUE
		Y11-3912-000	LEAD	PURPLE
		Y11-3913-000	LEAD	BROWN
		Y11-3914-000	LEAD	GLAY
		Y11-4402-000	LEAD	BLACK
		Y11-4403-000	LEAD	RED
		Y11-4506-000	LEAD	ORANGE
		Y11-4511-000	LEAD	BLUE
		Y11-4514-000	LEAD	GLAY
		Y11-5002-000	LEAD	BLACK
		Y11-5003-000	LEAD	RED
		Y11-5006-000	LEAD	ORANGE
		Y11-5007-000	LEAD	YELLOW
		Y11-5012-000	LEAD	PURPLE
		Y11-5014-000	LEAD	GLAY

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REF.NO. C12-8311

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	CA1-2474-000	2		CA1-9070-000	12
	CA1-3588-000	18		CA1-9073-000	2
	CA1-4177-000(001)	18		CA1-9075-000	12
	CA1-5074-000	6		CA1-9076-000	12
	CA1-5077-000(XXX)	11		CA1-9078-000(XXX)	11
	CA1-5190-000	14		CA1-9079-000(XXX)	11
	CA1-5739-000	14		CA1-9082-000	4
	CA1-5826-000	6		CA1-9085-000	4
	CA1-6363-000	2		CA1-9094-000	5
	CA1-6364-000	2		CA1-9096-000	14
	CA1-6368-000	14		CA1-9097-000	5
	CA1-6454-000	14		CA1-9104-000	14
	CA1-6484-000(XXX)	14		CA1-9112-000	14
	CA1-6485-000	14		CA1-9113-000	14
	CA1-6492-000	18		CA1-9114-000	7
	CA1-6504-040	3		CA1-9115-000	7
	CA1-6522-000	6		CA1-9116-000	7
	CA1-6523-060	6		CA1-9117-000	7
	CA1-6525-000	6		CA1-9118-000	7
	CA1-6527-000	6		CA1-9119-000	7
	CA1-7284-000	18		CA1-9121-000	2
	CA1-7531-000	10		CA1-9122-000	2
	CA1-7605-000	7		CA1-9125-000	4
	CA1-7606-000	7		CA1-9126-000	7
	CA1-7618-000	14		CA1-9127-000	2
	CA1-7619-000	14		CA1-9128-000	14
	CA1-7752-000	10		CA1-9133-000	13
	CA1-7777-000	16		CA1-9159-000	5
	CA1-9002-000	14		CA1-9160-000	5
	CA1-9003-000	5		CA1-9164-000(020)	3
	CA1-9007-000	5		CA1-9165-000	3
	CA1-9044-000	5		CA1-9166-000	3
	CA1-9046-000	14		CA1-9168-000	3
	CA1-9050-000	13		CA1-9171-000	2
	CA1-9051-000	9		CA1-9176-000	18

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REF.NO. C12-8311

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	CA1-9197-000	6		CA1-9423-000	13
	CA1-9200-000	6		CA1-9424-000	18
	CA1-9201-000	6		CA1-9427-000	2,9,14
	CA1-9203-000	6		CA1-9428-000	3
	CA1-9204-000	6		CA4-1847-000	2
	CA1-9205-000	6		CA4-5112-000	19
	CA1-9207-000	6		CA4-5113-000	19
	CA1-9208-000	6		CA4-5114-000	18
	CA1-9209-000	6		CA4-5115-210	18
	CA1-9210-000	6		CA4-5118-000	18
	CA1-9245-000	16		CA4-5120-000	18
	CA1-9313-000	9		CA4-5121-140	18
	CA1-9320-000	3		CA4-5122-000	18
	CA1-9323-000	3		CA4-5129-000	18
	CA1-9324-000	3		CA4-5138-000	20
	CA1-9328-000	3		CA4-5154-000	18
	CA1-9330-000	3		CA4-5155-000	18
	CA1-9331-000	6		CA4-5157-000	18
	CA1-9332-000	6		CA4-5158-000	18
	CA1-9401-000	2,11		CA4-5160-000	19
	CA1-9402-000	2		CA4-5434-000	18
	CA1-9403-000	14		CA4-5435-000	18
	CA1-9404-000	5		CA4-5444-000	19
	CA1-9405-000	2		CA4-5446-000	18
	CA1-9406-000	2		CA4-5447-000	18
	CA1-9407-000	7		CA4-5449-000	18
	CA1-9410-000	5		CA4-5450-000	18
	CA1-9411-000	5		CA4-5467-000	18
	CA1-9412-000	2		CB1-2689-000	10
	CA1-9413-000	2		CB1-4204-000	5
	CA1-9414-000	4		CB1-4208-000	3
	CA1-9415-000	7		CB1-4209-000	2
	CA1-9419-000	11		CB1-4210-000	2
	CA1-9420-000	11,13		CB1-4211-000	2
	CA1-9422-000	3	*	CB1-4224-000(038)	8

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REF.NO. C12-8311

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*	CB1-4228-000(036)	8	*	CF1-3094-000	11
	CB1-4254-000	2	*	CF1-3101-000	19
	CB1-4255-000	2	*	CF1-3102-000	11
*	CB1-4280-000	9	*	CF4-0707-000	18
*	CB1-4281-000	9		CG1-0512-000	6
	CB1-4295-000	3		CG1-3023-000	5
	CB1-4297-000	2		CG1-3028-000	10
	CB1-4300-000	2		CG1-3033-000	9
*	CB1-4519-000	16	*	CG1-3034-070	17
*	CB1-4520-000	16		CG1-3035-000	13
*	CB1-4521-000	16		CG1-3044-000	10
*	CB1-4524-000	11		CG1-3045-000	10
*	CB1-4540-000(250)	11		CG1-3048-000	12
*	CB1-4551-000	11		CG1-3056-000	2
*	CB1-4554-000	11		CG1-3057-000	7
	CB1-4560-000	19		CG1-3061-000	6
*	CB1-4561-000	1	*	CG1-3106-000	13
*	CB1-4562-000	1	*	CG1-3107-000	8
*	CB1-4564-000	2	*	CG1-3110-000	16
*	CB1-4565-000	2	*	CG1-3112-000	11
*	CB1-4566-000	1	*	CG1-3113-000	11
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	CB4-0032-000	18	*	CG1-3116-000	11
	CB4-0033-000	18	*	CG1-3117-000	10
	CB4-0035-000	18	*	CG1-3118-000	10
	CB4-0036-000	20	*	CG1-3119-000	10
	CB4-0037-000	18	*	CG1-3120-000	4
	CF1-0423-001	6	*	CG1-3123-000	13
	CF1-1655-000	4	*	CG1-3125-000	15
	CF1-2152-000	5		CG4-0081-110	18
	CF1-2855-000	3		CG9-2670-000	14
	CF1-2987-000	16		CG9-2755-000	9
*	CF1-3090-000	8		CG9-2767-000	13
*	CF1-3093-000	11		CH1-0903-000	4

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REF.NO. C12-8311

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*	CH1-1363-000	8		CY1-1691-000	12
	CH2-5066-000	2		CY1-1692-000	12
	CH2-5067-000	2		CY1-1694-000	15
	CH2-5068-000	2		CY1-1695-000	15
	CH2-5069-000	2		CY1-1709-000	3
	CH2-5070-000	5		CY1-1710-000	3
	CH2-5071-000	4		CY1-1735-000	12
	CH2-6051-000	9	*	CY1-1759-000	14
	CH3-0052-100	18	*	CY1-1760-000	19
	CH3-0109-000	13		CY1-4191-000(XXX)	18
	CH5-0041-000	9		CY1-4193-000	20
	CH5-0120-000	9		CY1-4196-000	20
	CS1-5690-000	2		CY1-4197-000	20
	CS1-5696-000	6		CY1-4198-000	20
	CS1-5780-000	2		CY1-4199-000	20
	CS1-6535-000(XXX)	14		CY1-4200-000	20
	CS2-0173-000	19		CY1-4201-000	20
	CS2-0175-000	19		CY1-4202-000	18
	CS2-0176-000	19		CY1-4233-000	18
	CS2-0177-000	19		CY1-4234-000	18
	CS2-5003-000(XXX)	6,7		CY1-4235-000	20
	CS2-5020-000	16		CY2-5047-000	17
	CS2-5120-000	19		CY2-5064-000	17
	CS2-5261-000	18		CY2-5065-000	17
*	CS2-6404-000(020)	11		CY2-5066-000	17
	CS2-6931-000	5		X91-1737-120	15
	CS2-6946-000	15		X91-1737-170	4
*	CS2-7205-000	16		X91-2036-080	10
*	CS3-0086-000	10		X99-0467-000	6
*	CS3-0089-000	19		X99-0481-000	10,14
	CY1-1280-000	16		X99-0506-000	6
	CY1-1338-000(XXX)	3		X99-0562-000	18
	CY1-1339-000	16		X99-0573-000	6
	CY1-1340-000	6		X99-0580-000	6

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	X99-0583-000	6,7
	X99-0624-000	6
	X99-0629-000	18
	X99-0630-000	5,20
	X99-0633-000	16
	X99-0635-000	16
	X99-0684-000	18
	X99-0689-000	10
	XA1-1140-149	12
	XA1-1170-307	14
	XA1-3170-209	11
	XA1-3170-307	19
	XA1-3170-457	3
*	XA1-3170-659	11
	XA1-7170-189	18
	XA1-7170-207	18
	XA1-7170-209	18
	XA1-7170-229	18
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	XA1-7170-609	11
	XA1-7200-307	19
	XA4-1200-507	14
	XA4-4200-457	5,13
	XA4-6170-409	5
	XA4-6200-407	18
	XA4-6200-457	13
	XA4-7170-187	18
	XA4-8170-257	11
	XA4-8170-409	10
	XA4-8200-359	5
	XA4-8200-407	5

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	XA4-9170-407	18
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	XA4-9170-457	9
	XA4-9170-459	2,5,18
	XA4-9170-509	7
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	XA4-9200-557	5,14
	XA4-9200-607	10
	XA4-9200-609	5,14
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	XD1-1102-120	16
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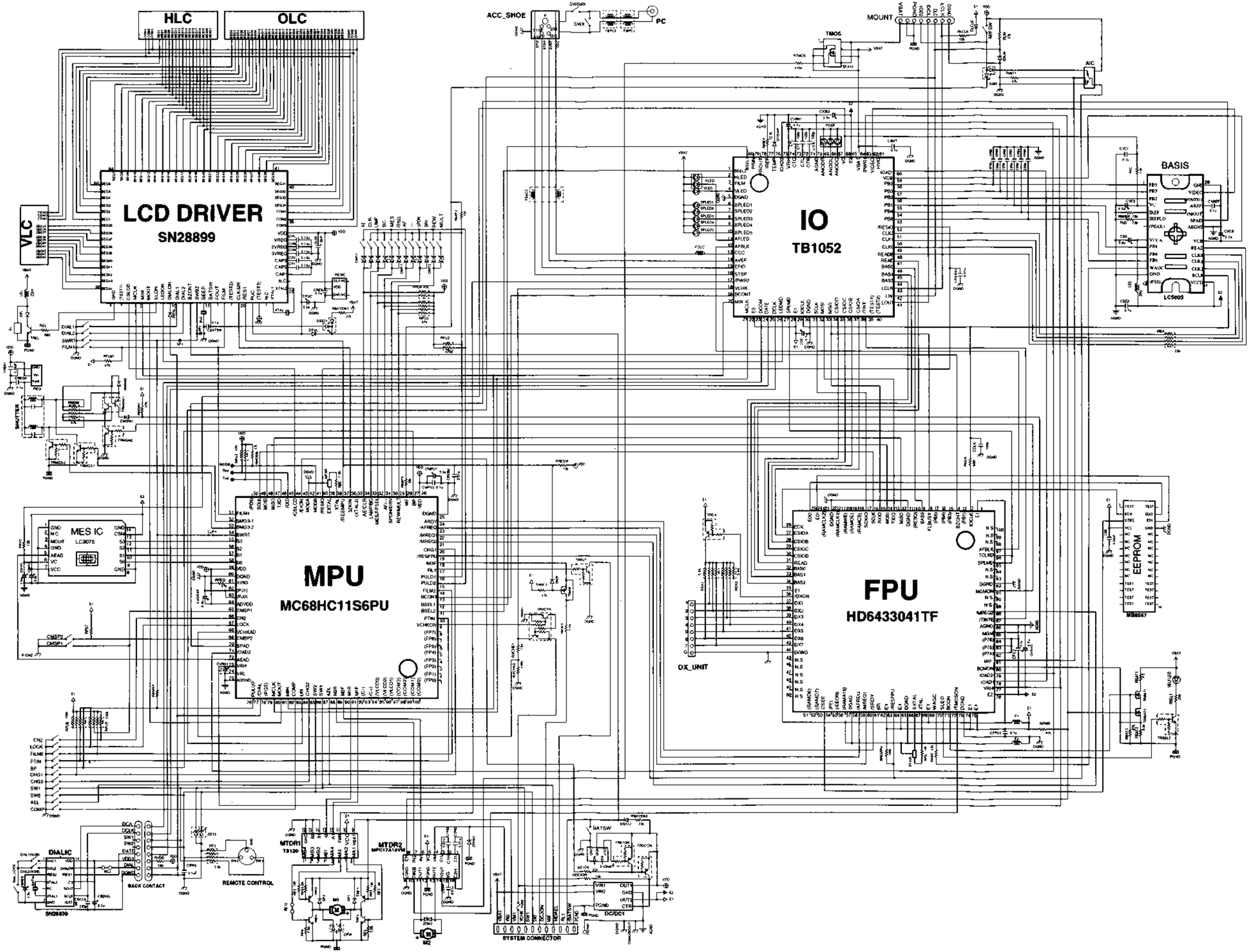
	XD2-1100-102	3
	XD2-1100-102	8
	XD2-1100-132	8
	XD2-1100-202	3
	XD3-0120-122	20
	XG8-1100-561	4
	XG8-1100-581	6,7
*	YN2-9159-000	15
	YN2-9217-000	15

Part 5

Electrical Diagrams



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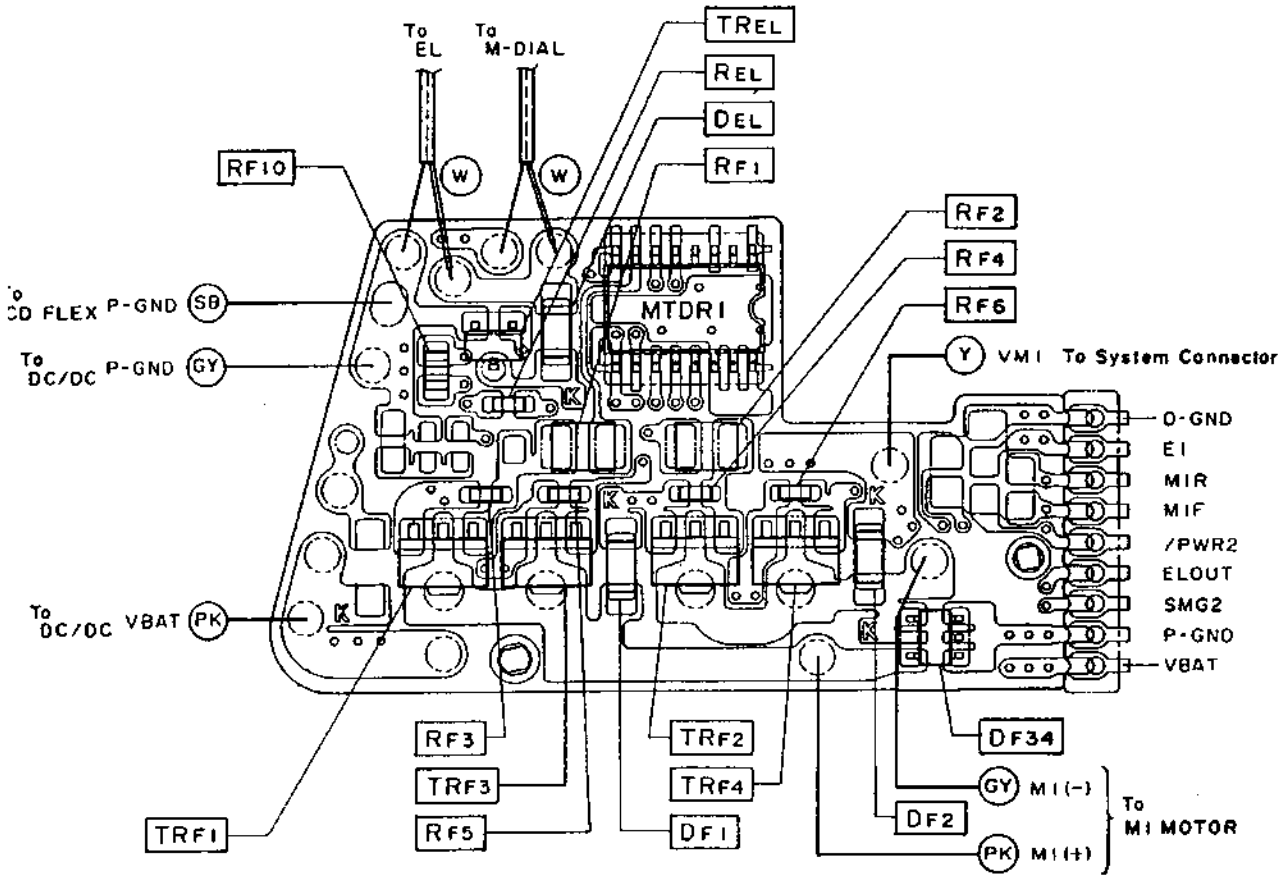
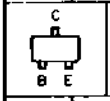
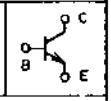
P.C.B. DIAGRAM

(M1 FLEX)

REF. NO. C12-8311



Tr	TREL, MG2
	
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	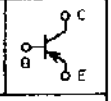
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	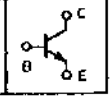

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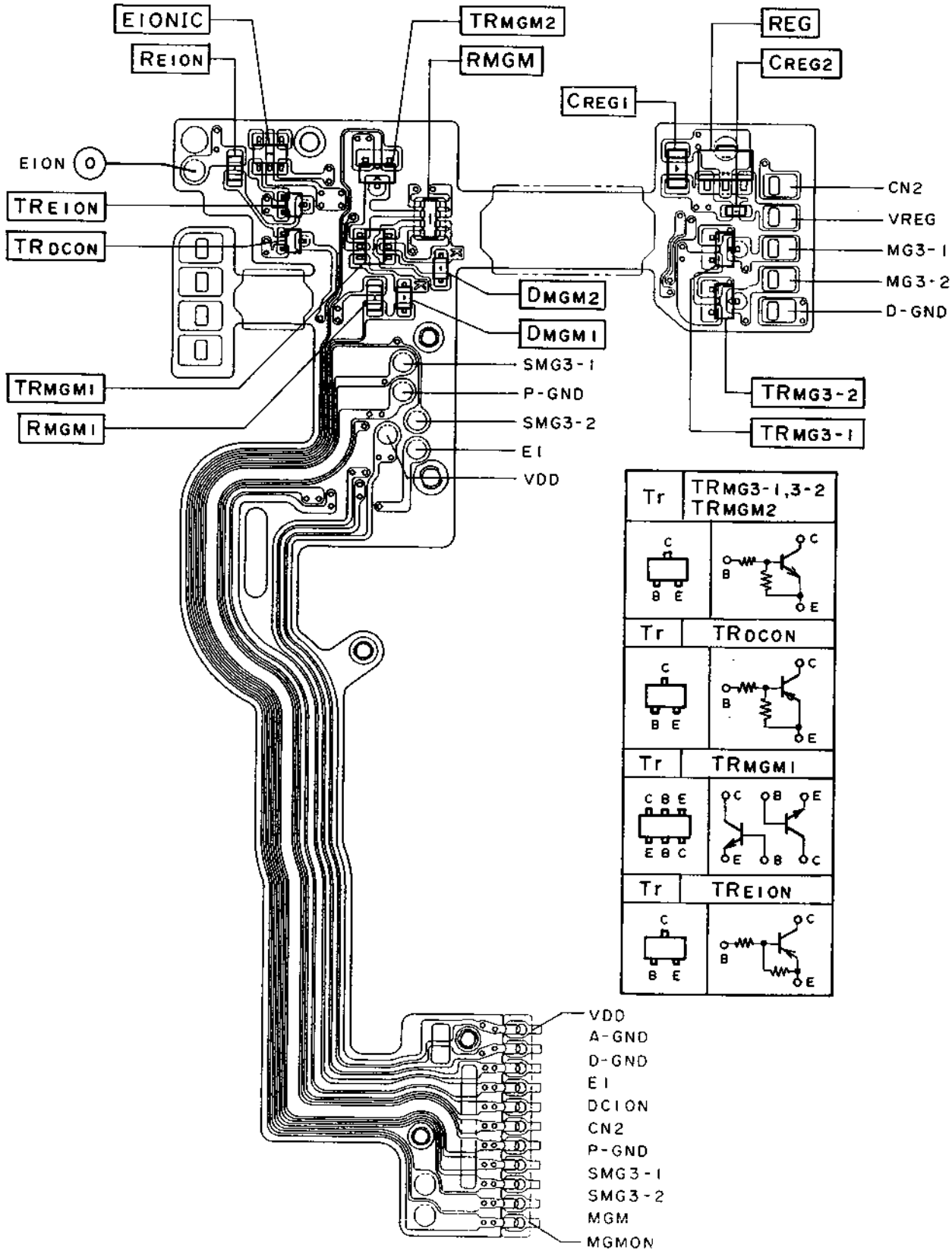
P. C. B. DIAGRAM

(SDC FLEX A)

REF. NO. C12-8311



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P. C. B. DIAGRAM

(SDC FLEX B)

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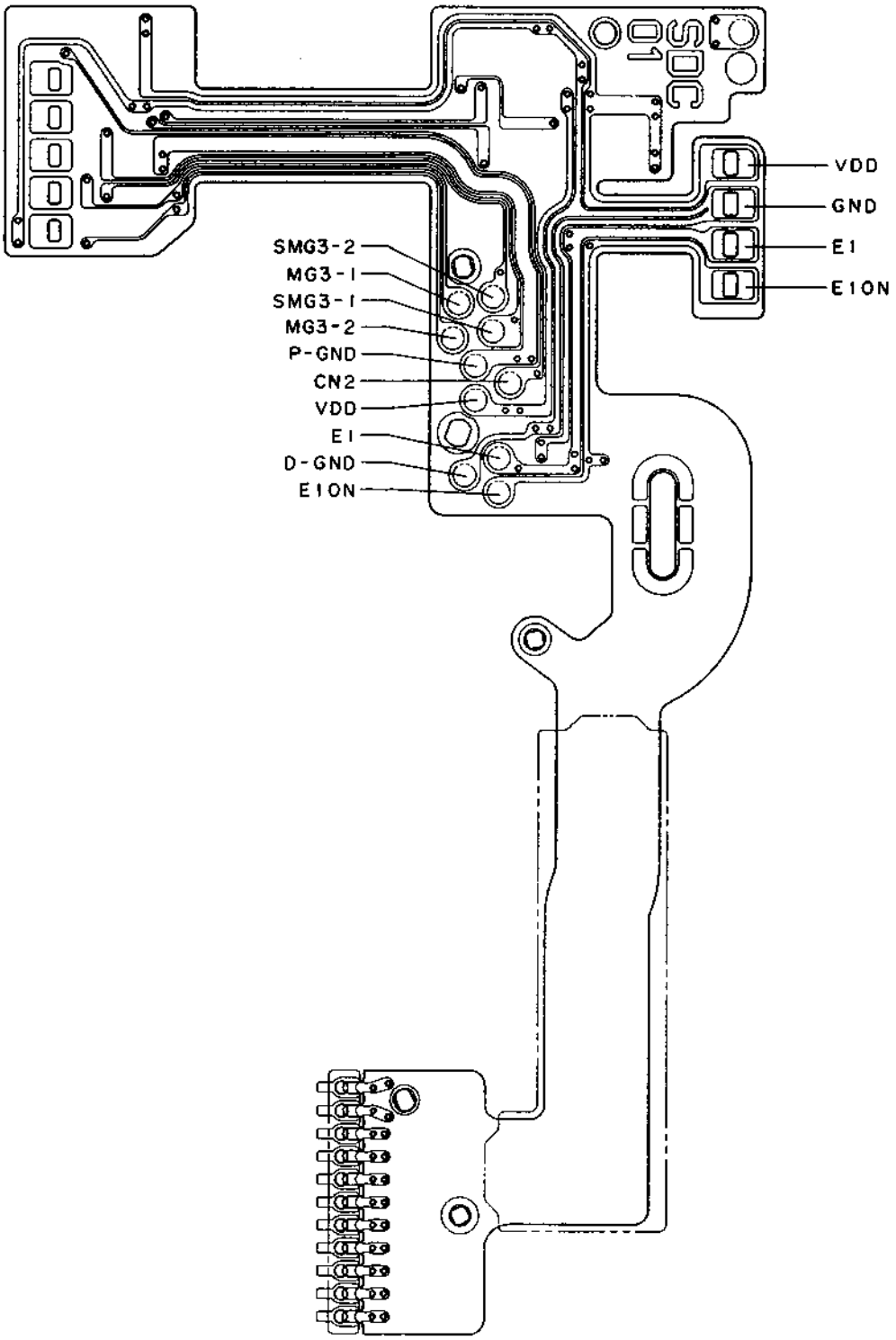

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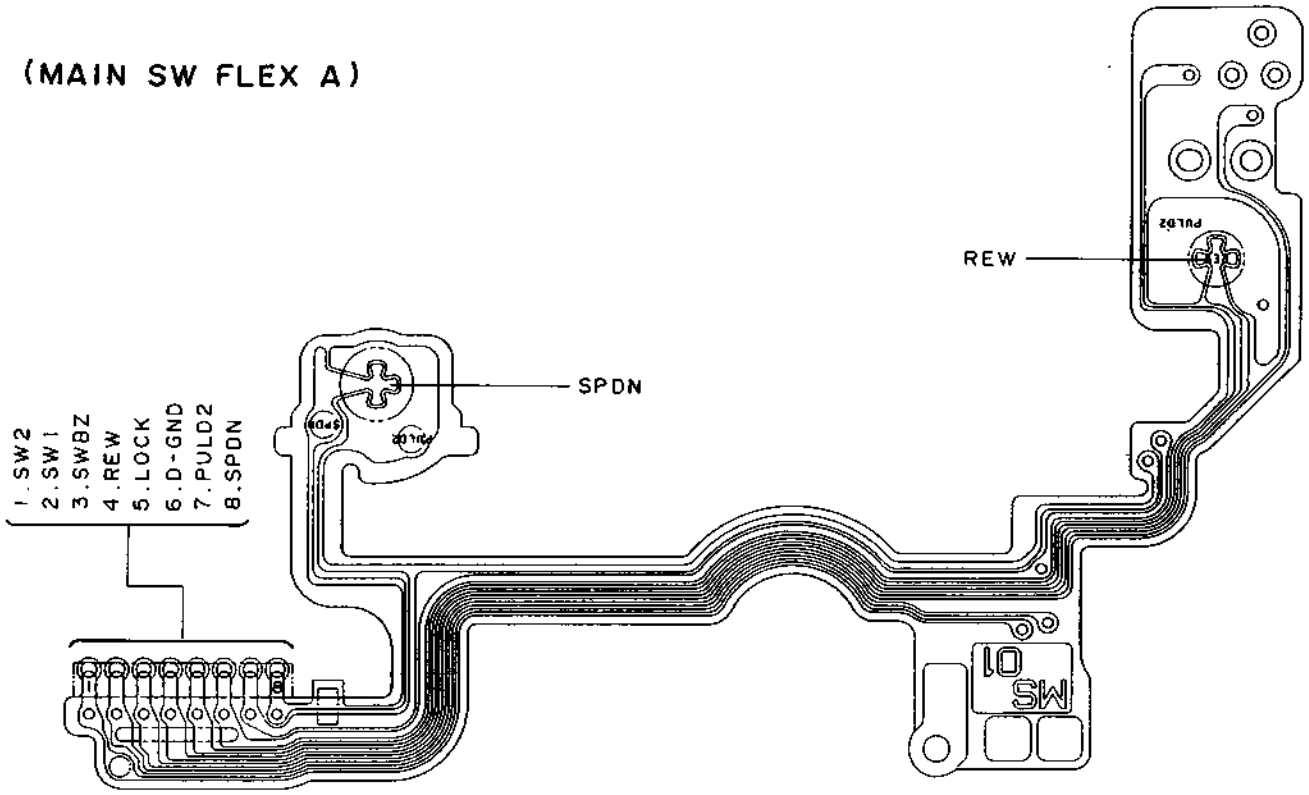
(MAIN SW FLEX A)



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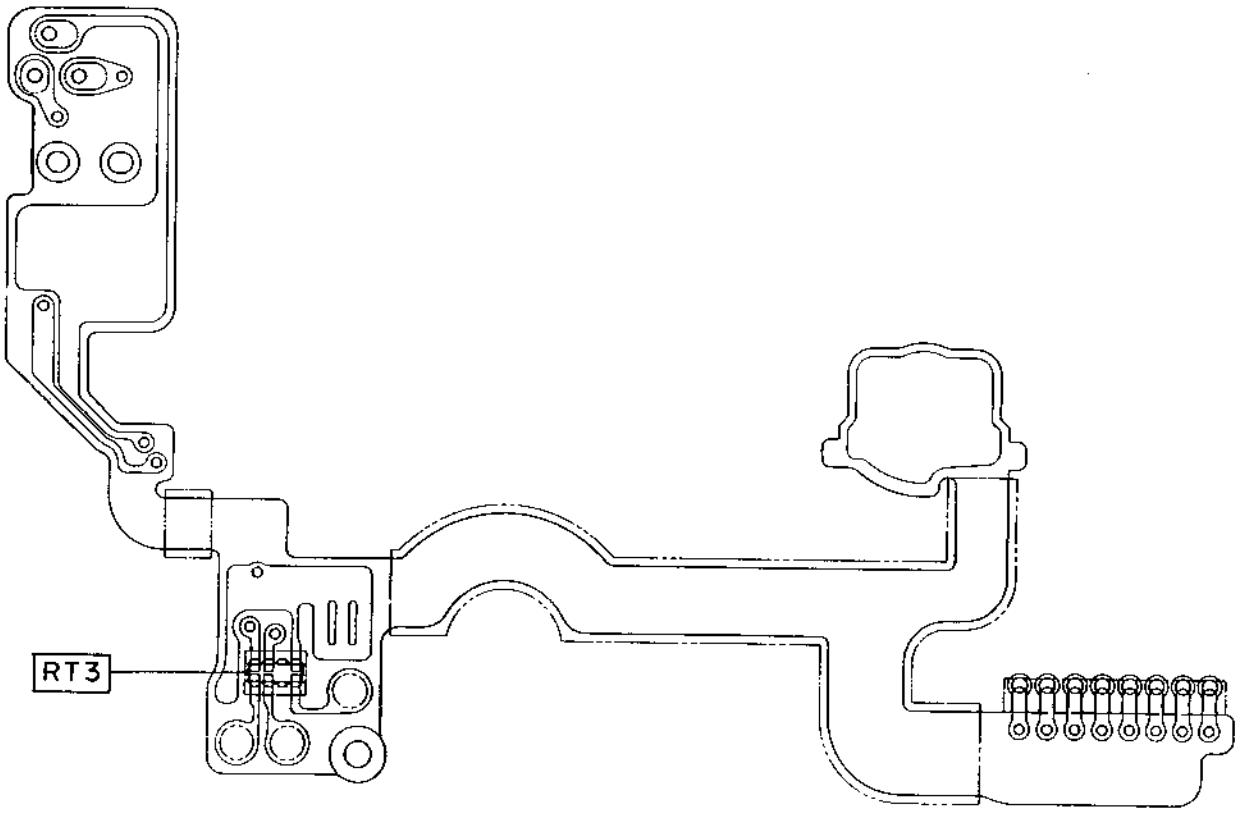

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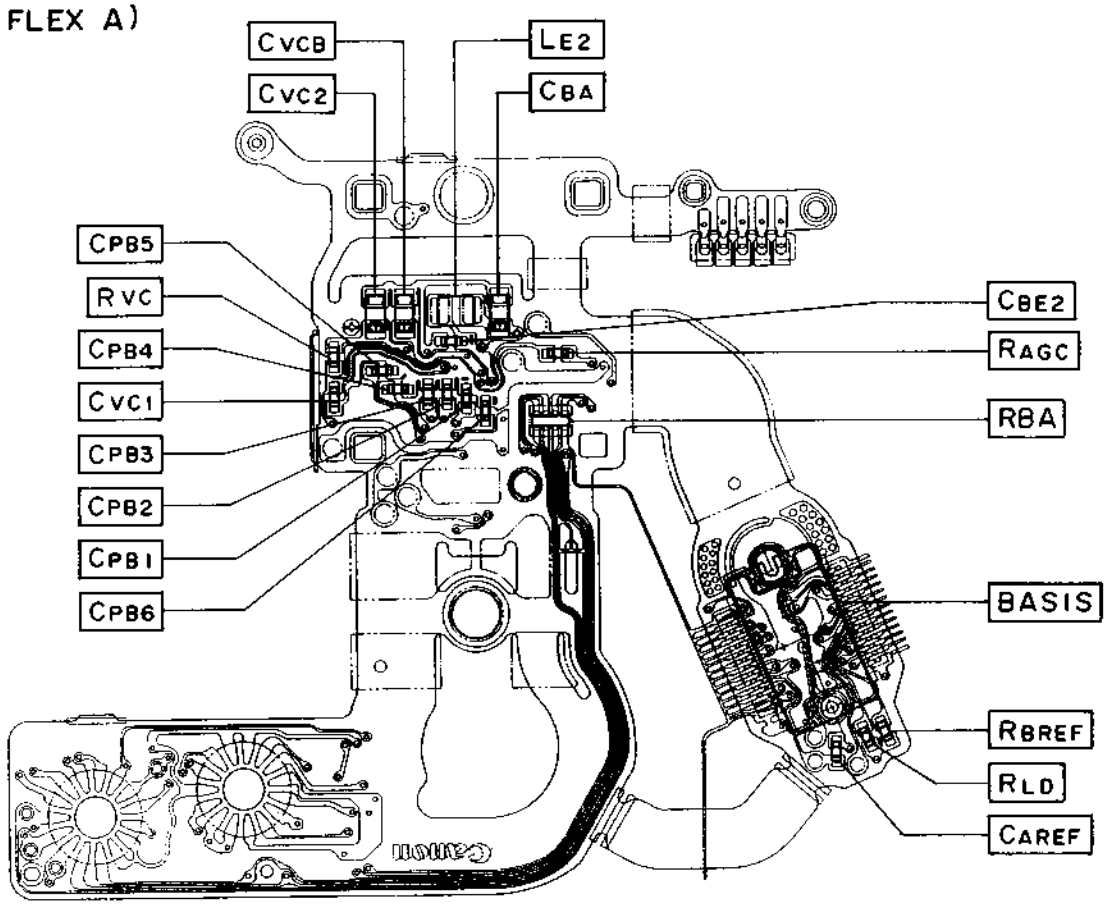
(BASIS FLEX A)



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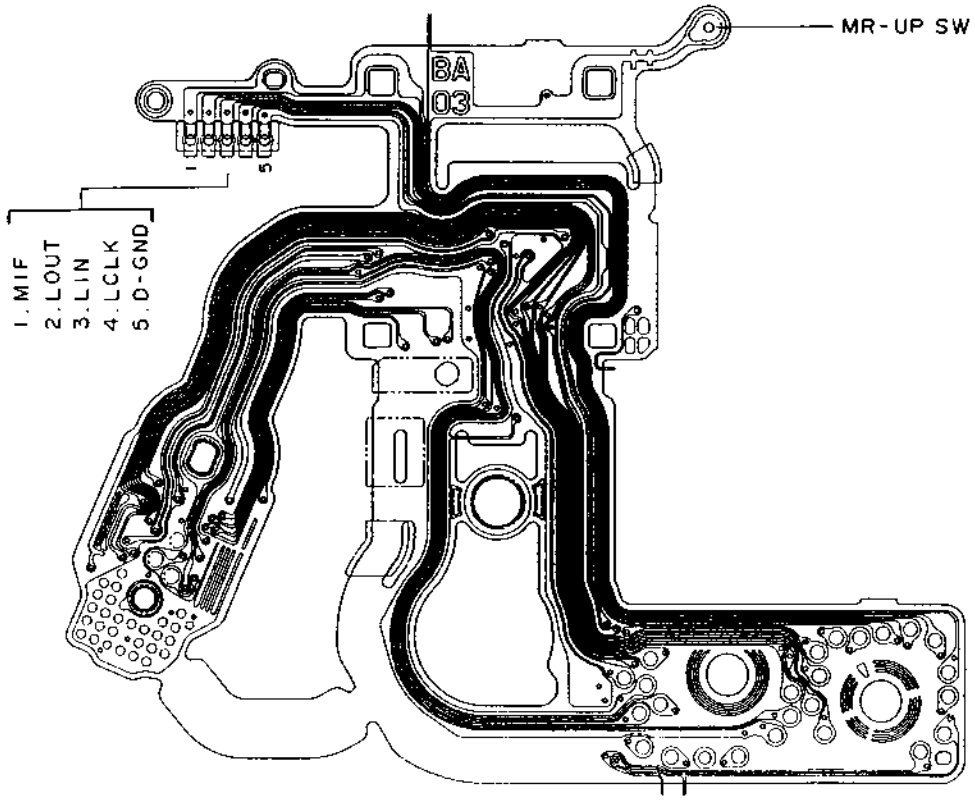

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P.C.B. DIAGRAM
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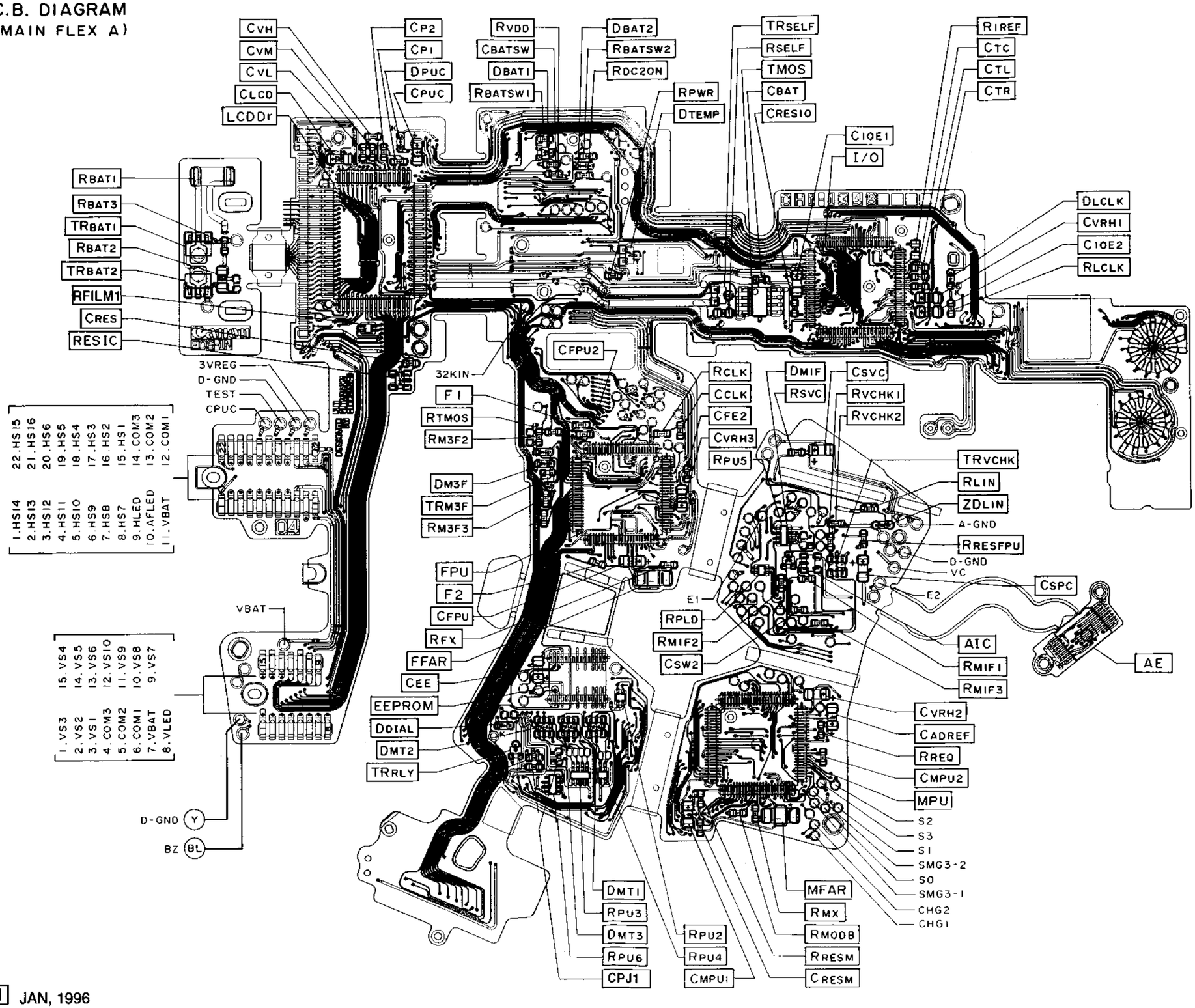

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	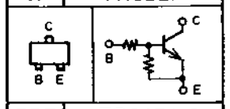
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	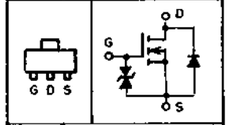
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	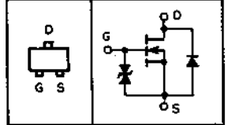
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	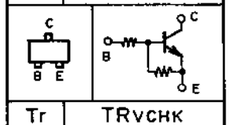
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	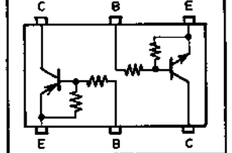
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	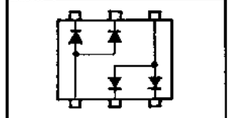
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	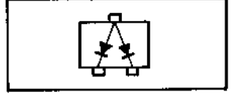

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P.C.B. DIAGRAM
(MAIN FLEX B)

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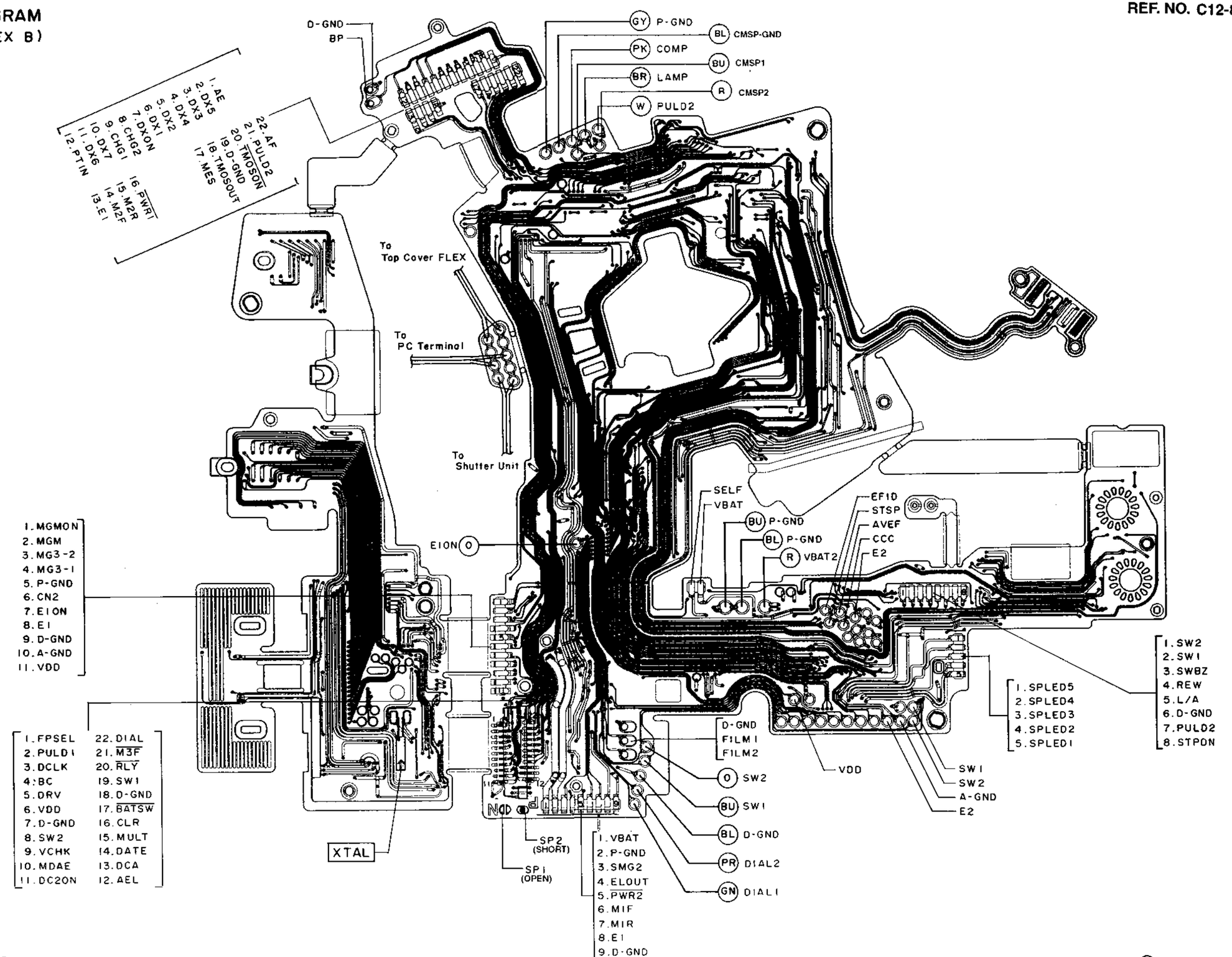

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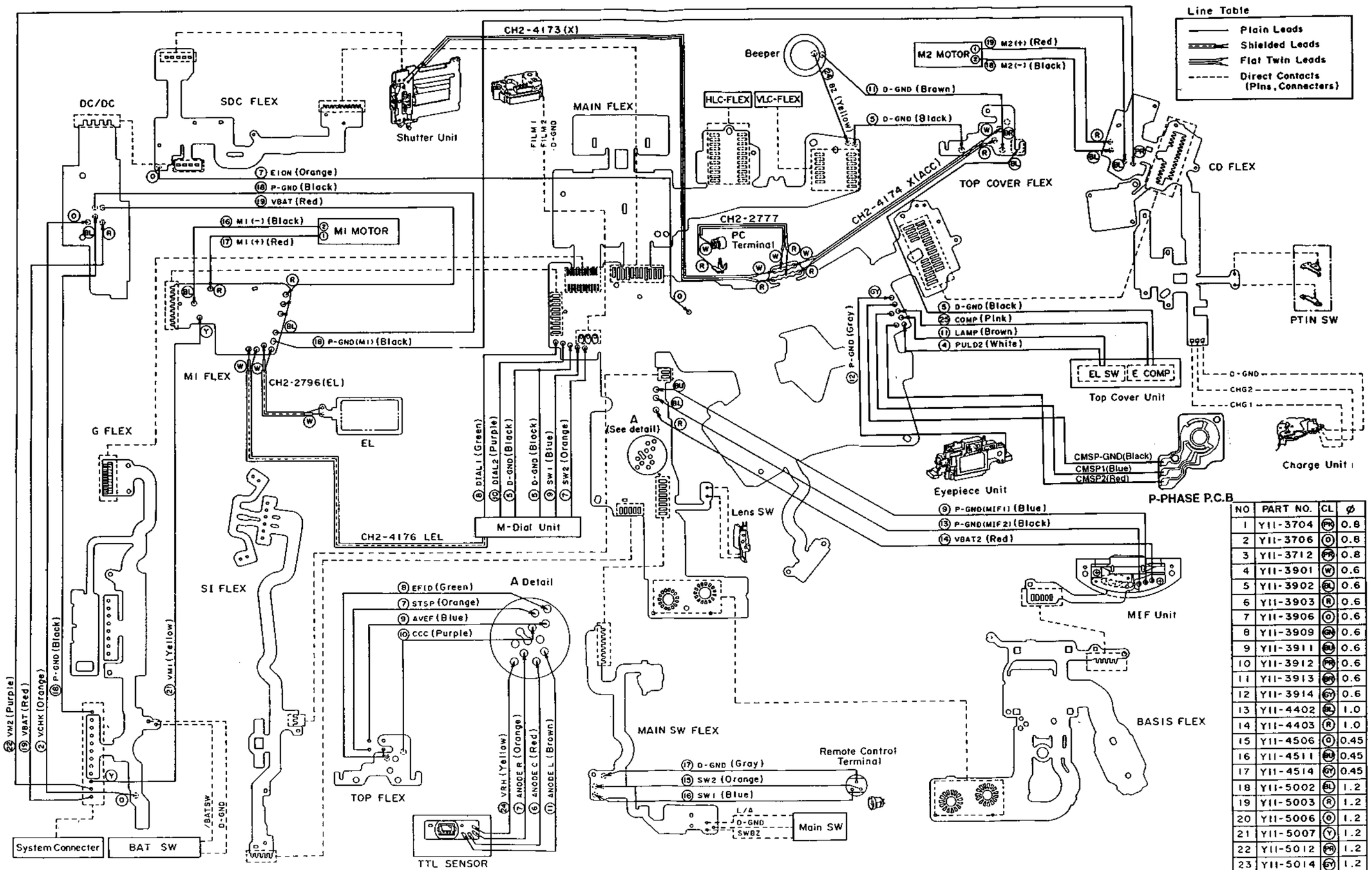

NO	PART NO.	CL	ø
1	YII-3704	PK	0.8
2	YII-3706	O	0.8
3	YII-3712	PR	0.8
4	YII-3901	W	0.6
5	YII-3902	BL	0.6
6	YII-3903	R	0.6
7	YII-3906	O	0.6
8	YII-3909	GN	0.6
9	YII-3911	BL	0.6
10	YII-3912	PR	0.6
11	YII-3913	BR	0.6
12	YII-3914	GY	0.6
13	YII-4402	BL	1.0
14	YII-4403	R	1.0
15	YII-4506	O	0.45
16	YII-4511	BU	0.45
17	YII-4514	GY	0.45
18	YII-5002	BL	1.2
19	YII-5003	R	1.2
20	YII-5006	O	1.2
21	YII-5007	Y	1.2
22	YII-5012	PR	1.2
23	YII-5014	GY	1.2
24	YII-3907	Y	0.6
25	YII-3904	PK	0.6

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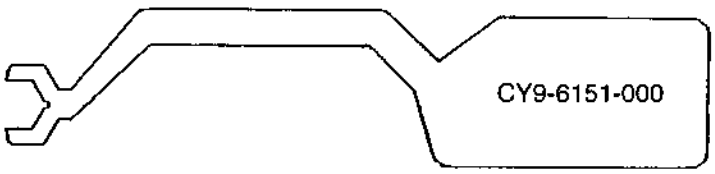
Appendix

Canon SERVICE TOOLS REPORT
Photo Products Quality Assurance Division,Canon Inc.
Report No. STR-176
Date 1995.03

Service Tool New Addition

1.Specifications

Order No.	Name	Purpose
CY9-6151-000	SPANNER,EOS-1N RS	For removal of PDB.from EOS-1N RS

2.Applied on :

EOS-1N RS C12-8311